



The New York  
Academy of Medicine



*Library Fund*  
(General)

Established 1878













# VIRGINIA

## MEDICAL MONTHLY

### Contents

- 81  
1954
- Guest Editorial, Vincent W. Archer . . . 1
- Confidence, Unlimited, H. Sherman Oberly . . . 3
- Primary Cancer of the Lung, Frank Philip Coleman . . . 7
- Alexander Humphreys, M.D.—1757-1802, Richard P. Bell . . . 13
- The Total Approach to the Diagnosis of Pulmonary Tuberculosis,  
Carl W. LaFratta . . . 17
- Congenital Diaphragmatic Hernia—A Report of Repair 17½ Hours  
After Birth, Marcellus A. Johnson, III . . . 22
- Near Fatal Anaphylactic Shock Associated with The Administration  
of Penicillin, Clifford G. Gaddy . . . 25
- Dermatorrhexis: A Case Report (The So-Called Ehlers-Danlos Syndrome),  
Bernard D. Packer and James F. Blades . . . 27

(Continued on page 6)

*Hard-hitting  
Antibiotic*

**ILOTYCIN**  
(ERYTHROMYCIN, LILLY)

IN TABLETS AND  
PEDIATRIC LIQUID

*Lilly* the originator of Erythromycin

# **SURITAL<sup>®</sup>** SODIUM

ULTRASHORT-ACTING INTRAVENOUS ANESTHETIC

SURITAL sodium (thiamylal sodium, Parke-Davis) produces smooth anesthesia with rapid, quiet induction and prompt, pleasant recovery.

Detailed information on SURITAL sodium will be mailed you on request.

LIBRARY  
SEP 15 1955  
NEW YORK ACADEMY  
OF MEDICINE  
300323



# VIRGINIA MEDICAL MONTHLY

## INDEX TO VOLUME LXXXI

January 1954—December 1954, inclusive

January — pages 1-52  
February — pages 53-102  
March — pages 103-142  
April — pages 143-200

May — pages 201-252  
June — pages 253-304  
July — pages 305-354  
August — pages 355-408

September — pages 409-462  
October — pages 463-518  
November — pages 519-572  
December — pages 573-620

## AUTHOR INDEX

Ackart, Richard J., 247  
Albertson, Horace A., 59, 117  
Alexander, John E., 332  
Archer, Vincent W., 1  
Barker, Allen, 166  
Barksdale, Edwin E., 321  
Barry, William F., Jr., 261, 475  
Beazley, Roy C., 513  
Beckwith, Julian R., 211  
Bell, Richard P., 13  
Birge, Henry L., 161  
Blades, James F., 27  
Bloom, Nathan, 369  
Bowden, Lemuel, 464  
Brown, Lee B., 588  
Budd, Samuel W., Jr., 56  
Buxton, Russell, 372  
Caffey, Eugene M., Jr., 530  
Camp, Paul D., 202  
Cash, James R., 166  
Chase, Harold F., 334  
Chitwood, Edmund M., Jr., 259, 546  
Coleman, Frank Philip, 7  
Cooper, George, Jr., 76  
Coulter, Robert L., 332  
Craig, Winchell McK., 410, 582  
Curtis, George H., 306  
Davis, T. Dewey, 56  
Deyerle, William Minor, 312  
Duncan, George A., 159  
Dunn, W. LeRoy, 375  
Edmonds, Albert M., 471  
Evans, Cecil F., Jr., 538  
Fitz-Hugh, G. S., 413  
Frank, Joe Lee, Jr., 69  
Friedman, Robert L., 261  
Gaddy, Clifford G., 25  
Garnett, R. W., Jr., 223  
Gibson, Count D., Jr., 298  
Gill, E. G., 228

Graziani, John G., 543  
Green, Thomas W., 114  
Groseclose, Eugene S., 253  
Guarino, George B., 259  
Haden, Charles W., 182  
Hamner, James L., 199  
Hampton, Ambrose G., 211  
Harris, John L., Jr., 117  
Harris, W. C., 530  
Harris, William H., Jr., 63  
Hennigar, Gordon, 171, 326  
Hickey, William F., Jr., 561  
Hunnicut, Thomas N., Jr., 538  
Hutcheson, J. Morrison, 612  
Johns, Frank S., 419  
Johnson, Marcellus A., III, 22  
Jones, Alfred P., 117  
Jordan, William R., 541  
Kay, William R., 171  
Kay, Saul, 326, 573  
Kelly, George W., Jr., 546  
Kern, Arthur B., 321  
Kernodle, Dwight T., 211  
King, M. K., 121  
Klingman, Walter O., 146  
Kruger, Alfred L., 69  
LaFratta, Carl W., 17  
Leavell, Byrd S., 166  
Lee, Herbert C., 573  
Lingamfelter, Carl S., 68  
Mack, T. R., 72  
Martin, Walter B., 201  
Mauzy, Charles Hampton, Jr., 103  
May, Virgil R., Jr., 312  
McKay, B. M., 363  
Meredith, J. M., 534  
Miskimon, Robert M., 109  
Montgomery, Howard H., 54  
Nagler, Benedict, 152  
Neter, Erwin, 355

Nokes, John M., 268  
Oates, Dorothy A., 561  
Oberly, H. Sherman, 3  
Olshansky, Simon S., 561  
Packer, Bernard D., 27  
Park, Herbert W., 156, 598  
Parsons, Philip B., 69  
Pearsall, H. Rowland, 215  
Perkins, E. W., 378  
Phillips, J. F., Jr., 386  
Plummer, Kemp, 383  
Policoff, Leonard D., 598  
Powers, Douglas, 363  
Powers, Paxton, 383  
Rawson, Arnold J., 591  
Riley, C. L., 273  
Russi, Simon, 261  
Savage, C. L., 226  
Sheppard, L. Benjamin, 388  
Speck, George, 270  
Spence, William T., 519  
Tate, Charles F., 211  
Thomas, J. Warwick, 524  
Thornton, John L., 326  
Troland, C. E., 72  
Trout, Hugh H., Jr., 117, 346  
Tucker, H. St. George, Jr., 166  
Waller, Marian, 471  
Walters, John D., 321  
Walton, W. W., 546  
Weaver, Edgar N., 215  
White, M. J. W., 381  
Whitehill, M. Richard, 591  
Whitmore, Charles W., 68, 595  
Williams, Carrington, 53  
Wise, Charles S., 143  
Wood, J. Edwin, 211  
Zfass, H. S., 72  
Zfass, I. S., 72

## SUBJECT INDEX

Adoption procedure, 131  
 Air embolism, 238  
 AMA Public Relations conference, 41  
 American Medical Education Foundation, 1, 127; — — — and how it is helping your medical school, 134, 199; — Red Cross blood program, 54  
 Anaphylactic shock associated with the administration of penicillin, Near fatal, 25  
 Anemia, with special reference to vitamin B-12, Recent therapeutic agents in the treatment of, 114  
 Aneurysm of the Circle of Willis complicating pregnancy, Rupture of an, 270  
 Antibiotic therapy, Clinical problems created by, 63  
 Antibiotics, Use and abuse of, 355  
 Arteriosus with the report of a case complicated by pneumococci bacterial endocarditis, The surgical treatment of patent ductus, 59  
 Asthma, Bronchial, 524  
 Automotive crash injury research program, The, 426  
 Autopsy, Consent in, 187  
 Back pain and sciatica, Low, 312  
 Baynham, Dr. William, of Virginia, 388  
 Biliary tract, Surgery of the, 419  
 Blindness, The role of the general practitioner in the prevention of, 228  
 Blood program, American Red Cross, 54; Complications in surgery due to abnormalities in — volume, with special reference to the syndrome of polycythemia, 161  
 Boeck's sarcoid, 171

**Books**

*Ackerman*—Surgical Pathology, 89  
*Despert*—Children of Divorce, 128  
*Fishbein*—Children for the Childless, 453  
*Galdston*—Beyond the Germ Theory, 453  
*Jordan*—You and Your Health, 394  
*Nichtenhauser-Coleman-Ruhe*—Films in Psychiatry, Psychology and Mental Health, 560  
*Podolsky*—The Jealous Child, 292; Music Therapy, 340  
*Richardson*—The Nursing Mother, 340  
*Welch*—The Manual of Antibiotics  
*Wolstenholm*—Peripheral Circulation in Man, 453  
*Yerke*—Salt and the Heart, 394

Bowel in the aged and the young, Intestinal obstruction of the, 381  
 Brain abscess associated with congenital heart disease, 534  
 Bronchitis, The treatment of chronic, 375  
 Cancer of the lung, Primary, 7  
 Carcinoma of the right colon, 56  
 Cardiac arrest, report of a case with complete recovery, 332  
 Cardiovascular emergencies, their diagnosis and treatment, 202  
 Cat-scratch disease—a regional lymphadenitis of non-bacterial etiology, 538  
 Child, Prevention and treatment of the asocial and antisocial, 336  
 Civil defense, Public health aspects of, 389  
 Colitis of children, Emotional factors in ulcerative, 363

**Colleges**

Medical College of Virginia, 349  
 University of Virginia, 348

Colon, Carcinoma of the right, 56; Report of 700 cases of irritable — in private practice, 109; Rupture of the descending —, 372  
 Confidence unlimited, 3  
 Cortisone, Bell's palsy cured with, 182  
 Cryptococcosis with 2-hydroxystilbamide, Treatment of generalized, 591  
 Death, Unsuspected pneumonia in sudden, 88

**Deaths**

Amiss, James Edward, 462  
 Anderson, Charles R., 102  
 Bagby, Alvin Fleet, 200  
 Baker, Charles Howard, 141  
 Bates, Robley Dunglison, 617  
 Beattie, John, 353  
 Blesse, Frederick Arthur, 353  
 Booth, J. Thomson, 518  
 Bright, J. Fulmer, 102, 142  
 Bristow, Henry Bernard, 200  
 Brown, George Woodford, 571  
 Cain, Howard Calvin, 141  
 Caldwell, Robert Dennis, 52  
 Carr, George Hopkins, 617  
 Coffman, Milton Buell, 141  
 Cooke, Thomas Sanford, 102  
 Delarue, Edward Arthur, 571, 619  
 Edwards, Agnes V., 305, 353, 407  
 Eley, Lemuel Leslie, 518  
 Evans, Everett Idris, 140, 200  
 Freeman, Allen Weir, 462  
 Gibson, Thomas Archer, 101  
 Goode, Joseph Gates, 617  
 Graham, William Tate, 50, 142  
 Gwathmey, Lomax, 251, 407  
 Hadley, William Sampson, 518  
 Hansbrough, Lyle Jamesson, 462, 571  
 Hare, John Hampton, 304  
 Howell, Francis Musgrave, 51, 619  
 Howle, Paul Williamson, 461  
 Hoyle, Christian Kevin Campbell, 462  
 Hubbard, James Felmer, 462, 572  
 Jackson, J. Walker, 141, 408  
 Jarratt, Thomas Franklin, 353  
 Kirkwood, Robert C., 51  
 Lehman, Edwin Partridge, 353, 618  
 Leo, Louis S., 252, 304  
 Long, George Hunter, 571  
 Longaker, Horace G., 141  
 MacLean, H. Stuart, 251, 353  
 Maxwell, George M., 52  
 McAlpine, Louis Allen, 618  
 Miller, Edgar Calvin LeRoy, 462  
 Morton, Heber Jones, 518, 572  
 Musgrave, George Harrison, 407  
 Neal, William Oscar, 141  
 Newman, Robert H., 462  
 Pilcher, Frederick, 304  
 Powell, William Leven, 617  
 Preston, Robert S., 51  
 Rodman, Nathaniel Fulford, 141, 252  
 Rucker, Marvin Pierce, 44  
 Saffer, Delbert Thornton, 51  
 Segar, Henry L., 200  
 Senter, Eugene William, 571  
 Spittler, Homer Amos, 617  
 Steere, Frederick Eugene, 51  
 Tabb, John Lloyd, Jr., 518, 620  
 Titus, Clifton T., 51, 102  
 Turman, Alexander Emmett, 304, 354  
 Tyler, George Colbert, 51  
 Valentine, Thomas Henry, 251  
 Wagner, Isaac Roy, 462  
 Warren, Robert Alexander, 141  
 Williams, John Powell, 518  
 Willis, Julius Drehrer, 141, 252  
 Woolwine, Charles R., 252  
 Wright, George Andrew, 618  
 Young, Albert T., 571

Dermatorhexis: case report (so-called Ehlers-Danlos Syndrome), 27  
 Diabetic patient, Rehabilitation of the, 541  
 Diaphragmatic hernia, Congenital, 22  
 Diphtheria, 37



Disability control; rehabilitation, 156  
Diverticulum, Recurrent hemorrhage secondary to ileal, 383

**Editorials**

Blue Cross-Blue Shield coverage of mental illness, 245  
Cancer of the breast, 346  
Constitution, A change in the, 612  
Editorial Board, Virginia Medical Monthly, 137  
Jones, Doctor J. Bolling, of Petersburg; An appreciation, 95  
Martin, Dr. Walter B., 399  
Medicine, Segregation in, 193  
Nursing care, The challenge of the ever increasing need for, 513  
Rucker, Marvin Pierce, 44  
Segregation in medicine, 193  
Totimycin, 298  
Veterans' medical care program, 456  
Williams, Carrington—our new president, 565

Education Foundation, American Medical, 1; Cost of medical —, 53; 127; — — — and how it is helping your medical school, 134; Excerpt from Congress on medical — and licensure, 182  
Ehlers-Danlos syndrome: Dermatorhexis, 27  
Electroencephalography at Lynchburg State Colony and Western State Hospital, Preliminary report on recent developments in, 185  
Embolism, Fat, 215; Air —, 238  
Emotional factors in ulcerative colitis in children, 363; — significance of severe trauma, 152  
Endocarditis, The surgical treatment of patent ductus arteriosus with the report of a case complicated by pneumococci bacterial, 59  
Endometriosis, Clinical significance of, 253  
Eyelid adhesions, (tarsorrhaphy), The indications and technique for intermarginal, 378  
Fat embolism, 215  
Gallbladder disease, The heart and, 211  
Goitre in Southwest Virginia, Incidence of, 386  
Guillain-Barre syndrome: report of a case in pregnancy and a review of the literature, 72  
Handedness, Practical advice about, 530  
Health rating, Virginia's, 76; Voluntary — insurance, 201  
Heart disease, Brain abscess associated with congenital, 534; The — and gallbladder disease, 211  
Heat reaction states, 281  
Hemolytic disease of the newborn, 471  
Hemorrhage in peptic ulcer, Massive, 121; Recurrent — secondary to ileal diverticulum, 383  
Hernia, Congenital diaphragmatic, 22  
Hospital admission x-ray program, A general, 69  
Humphreys, M.D., Alexander, 13  
Hyperthyroidism, Clavicular changes associated with secondary, 261  
Ilium, Primary melanoma of the, 259  
Immunization of infants, 603  
Indigent, Conference on problems of the medically, 90, 127  
Industry, Rehabilitation from the viewpoint of a physician in, 226  
Insurance, Voluntary health, 201  
Intestinal obstruction of the bowel in the aged and the young, 381

Intraspinal tumors and the part they play in general diagnosis, 410  
Leuconychia totalis, 68  
Licensure, Excerpt from congress on medical education and, 182  
Lung, Primary cancer of the, 7  
Lymphoma, Panel discussion on the treatment of malignant, 166; Remarks on —, 166; Radiation therapy of —, 167; Chemotherapy of —, 169  
Malpractice liability of hospital house staff physicians in Virginia, 601  
Medical Society of Virginia: Conference on problems of medically indigent, 90; 127; Committee on Legislation, 240; Reports for annual meeting, 492; Presidents, 510; First Interstate Scientific Assembly, 437; Annual Public Relations conference, 39; Annual meeting, 614  
Medical service, Facilitating, 543; The practitioners role in the — examiner system, 483  
Melanoma of the ilium, Primary, 259  
Meningitis, Meningococcus, 133  
Mental hygiene clinic in a small city, Functions of a, 84; Development of — health services in rural areas, 129; Admission to — hospitals, 395  
Mesenteric cysts, 546  
Mongolism, Research in, 485  
Nalline as a narcotic antagonist, The clinical use of, 334  
Narcotic antagonist, The clinical use of Nalline as a, 334  
Neurological disorders, Physiological mechanisms underlying rehabilitation of, 146  
Neurosurgery to general practice, The relation of, 519  
Newborn, Hemolytic disease of the, 471  
Obesity: a public health problem, 184  
Obstetrical complications: their management today and twenty years ago, 103  
Obstetrics: medico-legal problems in unattended deliveries, 393  
Optic chiasm, Diagnosis and treatment of lesions about the, 582  
Parotid gland, Mixed cell tumors of the, 413  
Paternity cases, Serological tests in disputed, 558  
Periarthritis nodosa accompanied by sarcoid-like histopathological changes, 595  
Peripheral vascular disorders, Management of, 369  
Pelvic surgery, Review of recent advances in radical: three cases, 117  
Penicillin, Near fatal anaphylactic shock associated with the administration of, 25  
Peptic ulcer, The psychogenic etiology of, 223; Massive hemorrhage in — —, 121  
Physical medicine for the general practitioner, 598  
Pneumonia in sudden death, Unsuspected, 88  
Poliomyelitis, Vaccination against, 86; Some observations on — in Virginia, 1954, 551; — vaccine field trials in Virginia, 1954, 288  
Polycythemia, Complications in surgery, due to abnormalities in blood volume, with special reference to the syndrome of, 161

- Pregnancy, Report of Guillain-Barre syndrome in a case of, 72; Rupture of an aneurysm of the Circle of Willis complicating —, 270
- Pruritus of the vulva, 273
- Psychiatric social work, 33
- Pulmonary tuberculosis: non-sanatorium treatment of the active case, 553; The total approach to the diagnosis of —, 17; Tuberculin test in —, 180; —, 232, 285; Specific drug therapy in the treatment of —, 588; Modern therapy—non-sanatorium care of the active case, 605
- Rehabilitation problem, The, 143; Physiological mechanisms underlying — of neurological disorders, 146; —: emotional significance of severe trauma, 152; — in disability control, 156; —: maintenance and restoration of function in severe trauma, 159; — of the diabetic patient, 541; A cooperative procedure with the practicing physician in vocation —, 561; — from the viewpoint of a physician in industry, 226
- Rectum, Papillary tumors of the, 573
- Rosacea, Recent developments in the treatment of acne and of, 306
- Salivary glands, Tumors of the, 326
- Sarcoid, Boeck's, 171; Periarteritis nodosa accompanied by — like histopathological changes, 595
- Sarcomas, The diagnosis and treatment of soft part, 464
- Sciatica, Low back pain and, 312
- Scleroderma, Generalized, 171
- Shock associated with the administration of penicillin, Near fatal anaphylactic, 25
- Skin manifestations of internal disorders, Some, 321
- Societies**
- Alexandria Medical Society, 299
- Albemarle County Medical Society, 138
- Alleghany-Bath Medical Society, 401
- American College of Chest Physicians, 458
- American Medical Association, 402
- American Surgical Society, 303
- Arlington County Medical Society, 98
- Bedford County Medical Society, 138
- Buchanan-Dickenson County Medical Society, 138; 567
- Danville-Pittsylvania Academy of Medicine, 46
- Fauquier County Medical Society, 401
- Fourth District Medical Society, 46
- Fredericksburg Medical Society, 138
- Hanover County Medical Society, 613
- Lynchburg Academy of Medicine, 138
- Medical Association of the Valley of Virginia, 567
- Medical Society of Northern Virginia, 97
- Mental Hygiene Society, 198
- Mid-Tidewater Medical Society, 613
- Montgomery County Medical Society, 348
- Neuropsychiatric Society of Virginia, 405
- Northern Neck Medical Association, 46, 613
- Patrick-Henry Medical Society, 613
- Princess Anne County Medical Society, 195
- Richmond Academy of General Practice, 139
- Richmond Academy of Medicine, 46
- Richmond Eye, Ear, Nose and Throat Society, 139
- Seaboard Medical Association of Virginia and North Carolina, 47
- Smyth County Medical Society, 138
- Southwestern Virginia Medical Society, 567
- Tazewell County Medical Society, 195
- Tri-County Medical Society, 137
- Tri-State Medical Association of Carolinas and Virginia, 196
- Valley of Virginia Urological Association, 615
- Virginia Association for Mental Health, 198
- Virginia Pediatric Society, 248
- Virginia Society of Ophthalmology and Otolaryngology, 403
- Virginia Society for Pathology and Laboratory Medicine, 139
- Virginia State Board of Medical Examiners, 97; 458
- Virginia Surgical Society, 139
- Warwick-Newport News Medical Society, 98
- Washington County Medical Society, 613
- Williamsburg-James City County Medical Society, 98
- Tarsorrhaphy: the indications and technique for intermarginal eyelid adhesions, 378
- Trauma, Emotional significance of severe, 152; Maintenance and restoration of function in severe —: rehabilitation, 159
- Trichobezoar—a case report, 475
- Tuberculosis, Notes on: symptoms, 31; How contagious, 81; Standard diagnosis, study, sputum examination and x-ray, 124; tuberculin test, 232; History, physical examination, gastric lavage, 285; Special diagnostic studies, 341; What is a reportable case, 397; Modern therapy, 430, 487; The total approach to the diagnosis of pulmonary —, 17; Tuberculin test in pulmonary —, 180; Pulmonary —, 232, 285; Specific drug therapy in the treatment of pulmonary —, 588; Non-sanatorium care of the active case, 605
- Tumors of the parotid gland, Mixed cell, 413; — and the part they play in general diagnosis, 410; — — — salivary glands, 326; Papillary — — — rectum, 605
- 2-Hydroxystilbamidine, Treatment of generalized cryptococcosis with, 591
- Typhoid fever carriers, 237
- Ulcer, Massive hemorrhage in peptic, 121; The psychogenic etiology of peptic 111, 223
- Unattended deliveries, Medico-legal problems in, 393
- Uterus, Retroversion of, 268
- Virginia's health rating, 76
- Vitamin B-12, Recent therapeutic agents in the treatment of anemia with special reference to, 114
- Vulva, Pruritus of the, 273
- X-ray program, A general hospital admission, 69
- Workmen's compensation law, The doctrine of aggravation under the, 35

# Virginia Medical Monthly

Vol. 81, No. 1  
WHOLE No. 1219

RICHMOND, VA., JANUARY, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## GUEST EDITORIAL

### American Medical Education Foundation

This open letter is written to members of The Medical Society of Virginia in behalf of the American Medical Education Foundation.

**F**OR the benefit of those who have not learned about this fund, it may be well to give a brief outline of the reason for its formation.

During the past decade, the cost of medical education has risen very rapidly, due to many factors: (1) Salaries of teachers. To compete with private industry which needs many scientists such as teach in medical schools, the salary scale has risen markedly. Technical salaries have also risen for the same reason. (2) Cost of materials used in laboratories. (3) Marked increase in the number of teaching laboratories due to the rapidly expanding field of medical knowledge. (4) Tremendous increase in the cost of teaching beds in hospitals, and a similar increase in the operating of teaching clinics.

The budgets of medical schools have not been increased proportionately, and universities of which medical schools are only one part, cannot get increased appropriations in the case of State or Municipal medical schools, and the income from endowments in privately financed medical schools has not been able to keep pace with this increase.

Only two alternatives present themselves if medical schools are to continue to give a good quality of instruction. The first is federal subsidy of medical education. This is dangerous for several reasons. Due to economies in government, the allocations to institutions could be cut materially at any session of Congress which would wreck teaching programs. Another excellent reason for not going on "federal relief" is that under rulings of the Supreme Court of the United States, the Federal Government, if it so desires, can *control* the expenditure of any appropriation. None of us likes the latter implications!

The second alternative is the establishment of a fund such as the American Medical Education Foundation with annual subscriptions from physicians, supplemented by funds allocated by industry, friends of Medicine, and the like.

All of us received our medical education at a much greater cost than was paid by us in our tuition charges. In fact, we were provided what might be termed "working capital" to the extent of several thousand dollars. This "capital" has enabled us to make a good living, since the average income of a doctor is higher than of any other profession. Shouldn't we look upon this as a loan to be repaid over a period of years, now that we have a good earning capacity? Your alma mater, or the medical school

of your choice, desperately needs money in order to continue to provide good medical education. Don't force this school to go to the Federal Government, hat in hand, asking for financial help.

The A.M.A. has underwritten all costs of operation of the Foundation so that every dollar contributed goes to the school of your choice, without any deduction whatsoever for operational or promotional expense.

Help repay this personal debt of yours by contributing generously *each year* to the school of your choice.

VINCENT W. ARCHER, M.D.,

*President, The Medical Society of Virginia*

---

Dr. Archer is Professor of Roentgenology and chairman of that department at the University of Virginia, School of Medicine.

---

### P. R. Survey

A public relations questionnaire was recently sent to 210 Virginia physicians in five specially selected localities in order to sample the thinking of the membership with regard to the State PR program.

The replies were both interesting and enlightening. For example, 95% of those replying approved the monthly newsletter "Current Currents", while 70% read the monthly bulletins for office personnel, 86% approved the PR course for office personnel, but only 50% thought that a similar joint course for physicians and office personnel would be well received. 89% were in favor of using good TV films whenever possible.

All in all, it would appear that a majority of the members of the Society approve the efforts of the Public Relations Committee.



## CONFIDENCE, UNLIMITED\*

H. SHERMAN OBERLY, PH.D.,  
President, Roanoke College,  
Salem, Virginia

## INTRODUCTORY REMARKS BY DR. JOHN E. GARDNER

The Hippocratic oath is familiar to all of us who took it when we solemnly faced the duties of our profession. Hippocrates, the father of medicine, we are told, was a learned, orderly, observant and humane man with an earnest desire to record his knowledge for the use of his brother physicians. One sentence in that oath reads: "I will impart this knowledge by precept, by lecture, and by all other manner of teaching, not only to my own sons, but to the sons of him who taught me and to disciples bound by covenant and oath, according to the law of the physicians, but to none other."

It is particularly fitting then, it seems to me, that we should have as our featured speaker to-night, a man, who like the father of our profession, is also learned, scientifically trained and humane, and who, like Hippocrates too, has devoted his richly significant life, as a trained psychologist and administrator to helping others to the best of his power. Never using magic or charms, other than his own engaging personality, he goes always, as he has come to us tonight, as a friend and helper.

For a number of years, our speaker was Dean of Admissions at the University of Pennsylvania. If he chose, he could give us a highly interesting report on his experiences with the thousands of applicants for the medical school alone. Since coming to Salem in 1949 he has, as had his predecessor Dr. Charles J. Smith, won a warm place in the hearts of the faculty and student body of Roanoke College, and of the citizens of Salem and Roanoke, and the country at large.

Dr. H. Sherman Oberly did his undergraduate work at Muhlenberg College and holds a Ph. D. degree in psychology from the University of Pennsylvania. He also holds honorary degrees from his Alma Mater and Gettysburg College. It gives me no little satisfaction to present to you at this time, Dr. H. Sherman Oberly, President of my own Alma Mater, Roanoke College.

It is an honor to be invited to address the members of The Medical Society of Virginia, and a privilege for the president of a liberal arts college to be permitted to address some remarks regarding items of mutual interest. The selection of a topic was left in my hands when, some five months ago, I accepted the invitation. This, therefore, means that the period of "simmering" has been long, and what I present tonight represents the boiling point. Whether or not the "brew" is complete and "tasty" remains to be seen.

\*Address presented by invitation before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.

Yes, the selection of a topic is usually left to one—especially a college president. Some folk believe that he is erudite, and is capable of talking in any field. I warn you that I have always been most careful to avoid such pitfalls, and so, I must try to limit my subject to something which is at least familiar. Some ideas which have floated before my mind have been:

1. "A layman looks at the medical profession."
2. "Preparation for the practice of a medical science."
3. "What does the layman seek from the medical profession?"
4. "My physician and I."

Objections to these may be obvious, but I can give you a few reasons why I have discarded them. For example, I should not be so bold as to try to talk about what a layman thinks of the medical profession. I have never told the shop foreman in the garage what is wrong with my car, nor advised him what to do. I have never told my dentist how to work over my teeth, although I have been free in telling him where I think pain originates! Some years ago when our son was in the third grade, his teacher reported that he was having considerable trouble with his reading, and sent books, charts and instructions and a note to me, suggesting that, since I was a "psychologist," I could render some help. My reply, almost too immediate, was to the effect that I knew nothing about teaching reading and that she might as well have sent dental tools—and, of course, I was forever blackballed in that school as a non-cooperative parent. Within the last few months a repair man appeared at our home. During the half hour of his visit, I watched him, and for some reason, our casual conversation came around to medical treatment. I was fascinated, not only by his use of technical words used in the medical profession, but by his calm assurance that most laymen can diagnose and treat many diseases—and why? The simple truth seemed to be that most of the practitioners with whom he had dealt knew less than he. I was moved to write down a list of disorders, which could start with appendectomies, biopsies, cancer, dermatological diseases, erysipelas—and on through the alphabet including the heart, indiges-

tion, jaundice and the Kinsey report. I am sure you have all met this layman, in one way or another, yourselves.

My second proposal had to do with the preparation for the practice of medicine, but this becomes technical and involves the choices of a college, a medical school, the hospital where one shall interne, and the locality where the practice shall be set up. In fact, too involved for me, with no experience in the field.

Again, my third proposal is difficult, because I cannot speak for all laymen in stating what they seek. And, of course, my fourth topic—"My Physician and I" is all too personal. However, you will observe that in this "simmering" process I have constantly come back to the idea of the layman and his relationship to those in the medical profession.

A series of circumstances brought forward in my mind the idea which I wish to discuss this evening—a thumbnail description is "Confidence, Unlimited."

Confidence is the belief in an idea; belief that something exists even though it may not be subject to investigation by our senses. We can believe in the ability of a man, and this is brought about by observing how he solves problems. If we observe the way in which native intelligence is used, we form judgments which are associated with the words "success" or "failure". Going through this, we find implied that associated with the word "confidence" is the word "truth". I do not come before you to "bandy" words, or to confuse you with too many intangibles. Rather, I must lay a foundation for developing this theme.

First, I choose to ask you some questions. What do the members of the medical profession seek in a candidate for the profession? Similar questions can as well be asked regarding the law, ministry, engineering, teaching and all other professions.

Are these some answers which you will give me:

1. A candidate must possess native intelligence and ability.
2. A candidate must have completed a preliminary course (in a college) which includes the basic sciences. He must also complete the courses specified in his medical school.
3. A candidate must be able to present recommendations regarding his character, which must be above reproach.
4. There must be some "estimate" or "prediction" regarding his probable future success as a

practicing member of a medical profession.

5. A candidate should enter the profession with motives which are a credit to the profession.

I have been interested in a book—"How to Become a Doctor,"† which was prepared as a guide.

The following paragraph strikes me as being very important.

"When the young doctor graduates and goes forth to save humanity from the evil forces of disease, he is thrust into a position of importance and leadership in the community. He can better fill this place, and his success as a physician will be much greater, if he has a well rounded education, rather than being narrowly trained in the medical sciences. The successful physician must be a community leader and should be able to speak publicly upon occasion, to associate with other university trained people, to understand the personal and social problems of his clientele. He needs to be a sociologist, a philosopher, a psychologist, a father-confessor, an artist, a salesman, and many other things as well as an all-wise doctor."

Next, I should try to suggest what the layman seeks—it can probably be summarized in the four letter word—CURE. However, as a layman, I must not be surprised to learn that three possible phases of practice are (1) that of the general practitioner, (2) the specialist, and (3) the research worker. It is, I believe, the coordination among these three avenues which engenders confidence in the mind and heart of the layman.

A moment ago I referred to the "motive" of the candidate seeking admission to your profession. On one occasion, speaking before members of another profession, I raised the same question. To illustrate my point, I merely raised this question: "Should this boy be encouraged to enter the medical profession merely because his parents think that he would make a nice appearance wearing a white coat and carrying a stethoscope around his neck?"

This illustration seemed to impress a newspaper reporter who was present, for a headline indicated that I questioned the motive of all practicing physicians! In fact, I received critical letters and even suggestions that I demand that the reporter correct the headline. Of course, you can understand that I was simply trying to question the motive of the prospective candidate for any profession.

This question of motive has always been of primary interest to me. For a ten year period I served as a dean of admissions in a large university. My re-

†"How to Become a Doctor", by George R. Moon, A.B., M.A., Examiner and Recorder, University of Illinois Colleges of Medicine, Pharmacy and Dentistry: The Blakiston Company, Philadelphia, 1949.

sponsibility was the processing and selection of credentials in seven undergraduate schools. More than 60,000 full-time applications came through my office, from which slightly more than 18,000 students were registered. In reviewing these figures, I find that 4500 were accepted in Arts and Science, and of this number between 20% and 25% had signified their interest in a pre-medical program. I do not know how many were successful in completing the course and were accepted by schools of medicine, nor the number which eventually entered the profession. I do know, however, that I was always aware that we were looking for something more than mere grades.

By this time, my listeners will understand that my choice of a topic such as "Confidence, Unlimited!" is based upon experience, and has not been drawn from a hat. I am tempted at this point to follow the style of Edward R. Murrow's program—"This, I believe!"

*I believe* that the admissions committee in a college must take into account the record of the applicant—how has he demonstrated his ability in his own school. Furthermore, I must consider the applicant's reputation among his classmates and his community, and what the principal or headmaster may state regarding the character of the applicant. This is built up through *confidence* in the school, and a willingness to accept the word of an individual whom you trust and in whom you have *confidence* as to integrity. General aptitude tests are very important, for through these we can obtain a rating on a broader scale than that of any one school. In fact, aptitude tests serve a purpose similar to the many tests which the patient now undergoes upon entering a hospital for observation and treatment.

So, each fall, every college faculty looks at the new class with hope, and starts with a fervent determination to do the best job possible in the educational process. Those students who do not choose to work naturally fall by the wayside. In these days of trying to "get something for nothing", many young men and young women believe that mere physical presence in a classroom will bring about an atmosphere whereby the subject matter permeates his bloodstream. How can we fail to repeat, again and again, that *mental growth requires work!* Of this, I am confident.

The subject matter in a pre-professional program for medical sciences frequently prevents the student

from participating fully in extra-curricular activities, and he may even find it difficult to take those courses in other fields which he will never in the future be able to take up. Therefore, I maintain that a broad general program in liberal arts is the best suited for one who all too soon will enter fields of specialization. There was much consternation on my own campus within the last few weeks when a professor outlined the requirements for medical schools. Some students left this meeting with the idea that they were required to take four years of chemistry. Our records from last year's graduating class show that five of the eight students majored in biology, and three in chemistry.

Why should not a student who majors in English, history, government, psychology or sociology be a good prospect for a medical school? Do you want good citizens, or merely good technicians? Where can the student hope to browse in fields other than in science unless he does it during his undergraduate student days? Further, why should not *four* years of preparation be required in principle, as well as in practice?

These principles of broad premedical training are put into practice in some schools. I wish to quote from a letter received from one Dean of a school of medicine:

"It is the feeling of the faculty of our school of medicine that a medical student should be as broadly educated as possible and we, therefore, feel that our required biological and physical science courses should be practically maximum in any pre-medical course unless, obviously, a student is planning to major in any one of the sciences pursuing a program leading to a B. S. degree before admission to the School of Medicine. It is strongly urged that a student take more of the suggested elective courses since it is not true that a student taking as many sciences as possible will necessarily have a better chance of being accepted than students who have selected a broader cultural program."

(Tulane University, September, 1948)

This school also requests ratings as to the candidate's appearance, speech, manners, consistency, promptness, and intensity of effort. This places a great deal of responsibility on the college and the staff members. As time goes on, confidence is built up between institutions, and one must be fair and just. Recently I was asked to submit a letter of recommendation on behalf of the college. Following is a direct quotation from a faculty member regarding the applicant:

"Personally, I do not feel that he is the type of individual that Roanoke College wants at any medical school or



that the medical profession should have as a future member. If my memory serves me correctly, he was not popular with his fellow students and distinctly left a sour taste with me."

Having confidence in the writer of the letter, there was only one course of action. So, you see, confidence, comes early. As members of the profession, you are undoubtedly approached very often to talk with young men and young women about your profession. You have your own criteria for confidence in people. Begin now to line up good prospects!

In the same manner, the layman must have confidence in the members of the profession. The personal side is never under-estimated by you. Confidence is a belief in values. Last week I attended a luncheon at which there was an educator from Scotland. He is in this country on a Fulbright Scholarship, making a study of the selective processes used by American colleges. I asked specifically about the admission procedures used by the medical college in Edinburgh. He replied, with a sly smile, that the admission procedure was very simple. A Scot who was willing to lay out a one pound note

must have decided that the medical profession was all right for him. And he is admitted. Again—a matter of value.

We in the colleges must have unlimited confidence in the integrity and the ability of those whom we recommend to the professional schools. We have the opportunity to observe these young men and young women as they grow and develop during the college years. We have a tremendous responsibility in our endeavors to train these young people for places of leadership, and, especially, as good and sound citizens. This can hardly be done if the educational process is one-sided. Philosophy, religion, and a study of man in general, will help to bring about a situation where these leaders of tomorrow are a credit to our homes, colleges and the nation.

In conclusion, I speak as one who through experience has learned what confidence means. I respect and value the work done in all professions and, in my small way, I hope that I may have a part in developing your co-workers of tomorrow.

All of us in positions of responsibility must merit the confidence of our fellow citizens.

---

### Medical Education Meeting Set for February.

Discussions of interest to medical schools and licensing boards will be aired at the 50th annual Congress on Medical Education and Licensure February 7-8-9 at the Palmer House, Chicago. Conducted under the auspices of the AMA's Council on

Medical Education and Hospitals and the Federation of State Medical Boards of the United States, the Congress program will be built around a golden anniversary theme. More than 500 medical educators, officers and members of state licensing boards and others interested in postgraduate medical education are expected to attend.



## PRIMARY CANCER OF THE LUNG\*

FRANK PHILIP COLEMAN, M.D.,  
Richmond, Virginia

The phenomenal increase in the incidence of cancer of the lung must be viewed with alarm, and requires frequent evaluation of methods of diagnosis and treatment. Cancer of the lung now leads all other cancer of the viscera in frequency and accounts for approximately ten per cent of cancer deaths in the male. Deaths from this cause ranked second only to cancer of the intestinal tract in 1948, and in 1946 and 1947 it ranked ninth and fourth respectively. This suggests a real increase in the incidence of lung cancer, whereas Steiner's<sup>3</sup> study of necropsy material indicates that the increase is relative. Whether this increase is apparent or real is of little practical value, for the prevalence of lung cancer demands the concerted efforts of all physicians if its control is to become more effective.

The etiology of cancer of the lung remains as obscure as that of cancer elsewhere in the body. It has been suggested that excessive smoking carried out over a long period of time, twenty years or more, may be a causative factor in its production. So far, our laboratory has been unable to produce cancer of the respiratory tract in animals by the inhalation of cigarette smoke over a period of years.<sup>2</sup> The questionable carcinogenic agent released by smoking cigarettes has not been identified and must await experimental proof before it can be accepted as a cause of lung cancer.

Victims of lung cancer may be divided into three clinical groups. The majority of the patients, approximately 90 per cent, will exhibit pulmonary symptoms as the initial complaint of the disease. Less than 4 per cent are discovered in the asymptomatic stage by routine chest x-ray or by mass survey studies. Ten per cent of lung cancer produces symptoms which are not referable to the chest. This latter group will usually have hopelessly advanced lung cancer by the time the extra-pulmonary symptoms are properly interpreted. Arthralgia and painful extremities associated with roentgenographic evidence of elevation and thickening of the periosteum of the shafts of the long bones should suggest

the possibility of cancer of the lung, even in the absence of pulmonary symptoms. Interestingly enough, the pain and tenderness in the joints disappear with resection of the lung cancer, but usually the disease has spread beyond the confines of the lung and the symptoms recur in these patients. Symptoms of brain tumor, Horner's syndrome, or symptoms of generalized metastatic tumor may all occur in lung cancer without pulmonary symptoms. It is difficult to diagnose lung cancer in this group of patients at a time when surgical excision of the lung will meet with any measure of success.

Primary cancer of the lung may exist for months and occasionally for years before it produces pulmonary symptoms (Fig. 1). The lung is nearly transparent to the x-ray and even a small solid tumor stands out in sharp contrast to the radiolucent lung. This has enabled the roentgenologist to effectively detect cancer in its early stage as well as in the later symptomatic stages. The silent lung cancer may appear as a round shadow in the periphery of the lung, or, when situated more centrally, the appearance may be that of segmental atelectasis characterized by an area of increased density. The primary problem of identifying cancer in its early stages is confined to frequent and more widespread adult chest x-rays. The mass surveys for case finding by the Tuberculosis Association have uncovered many non-tuberculous abnormalities of the lung which all too often prove to be lung cancer. Abnormal shadows uncovered by these surveys which suggest lung cancer should be promptly brought to the attention of the family physician for immediate diagnosis and treatment. The asymptomatic lung cancer is the most favorable for treatment. We have found all of them resectable and, in 7 of the 8 cases herein reported, the new growth was confined entirely to the lung. This stands out in marked contrast to the 213 cases of symptomatic cancer of the lung where only 30 per cent were resectable and 88 per cent showed extension to either the mediastinal lymph nodes or beyond the lung.

Physicians as a rule are well acquainted with the pulmonary complaints of symptomatic lung cancer, but the presence of symptoms all too frequently in-

\*Read before the Joint Session of the Virginia General Practitioners Association and the Virginia Chapter of the American College of Chest Physicians, Richmond, Virginia, May 6, 1953.

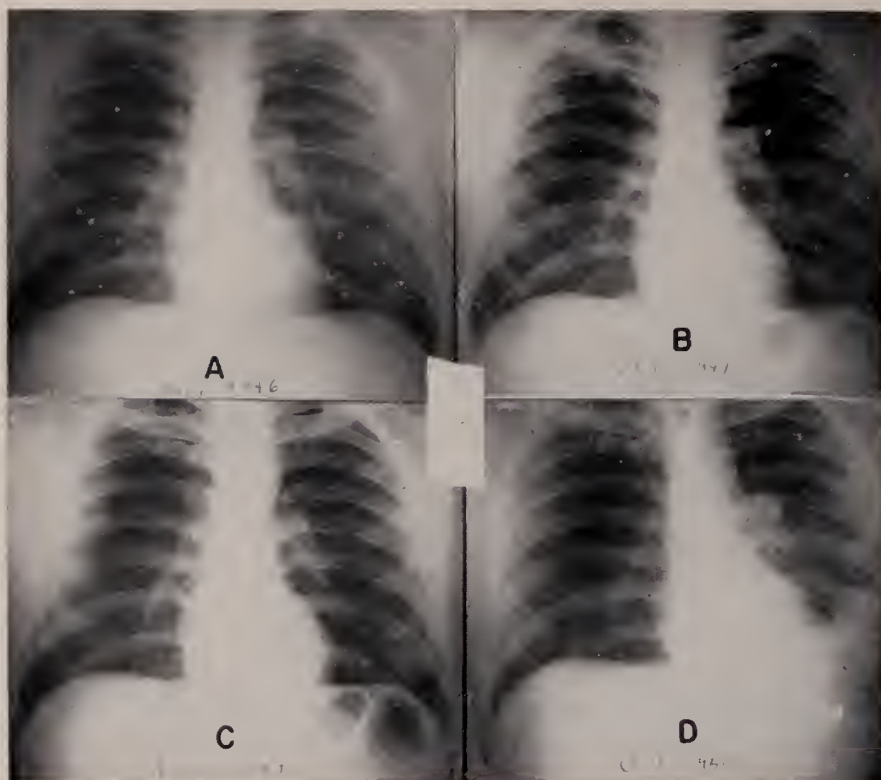


Fig. 1. A. Asymptomatic peripheral circumscribed carcinoma of the lung. B. & C. No change in peripheral lesion one and two years later. D. Explosive behavior of peripheral carcinoma three years later, showing increase in local growth and massive metastases to the mediastinum. This illustrates the danger of adopting an attitude of "wait and see if it grows" in solitary peripheral lung lesions.

dicates a far advanced lesion. Improvement in the results of treatment of symptomatic lung cancer can be accomplished only by making an earlier diagnosis. In 1946, the first 88 patients of the 233 cases herein reported had pulmonary symptoms for an average period of six months before establishment of the pathologic diagnosis of lung cancer, whereas the average duration of symptoms for the remaining patients was four months<sup>1</sup>. This is indicative of a favorable trend and further improvement can be expected in the future. Delay in diagnosis cannot be attributed entirely to the patient's negligence in seeking relief, for in many instances the physician failed to consider the presence of cancer and treatment was erroneously directed to pleurisy, influenza, tuberculosis, virus pneumonia and intercostal neuralgia. In 5 cases metastasis to the brain so overshadowed other symptoms that a craniotomy was performed for a primary brain tumor. It is essential to be aware of the early symptoms of lung cancer and to maintain a high degree of suspicion of malignancy in those patients who present atypical pul-

monary complaints or abnormal findings in the chest film. Symptomatic lung cancer frequently masquerades as suppurative and non-suppurative infections of the lungs and bronchi, atelectasis, lung cysts, emphysema, and benign tumors.

Cough, pain, hemoptysis, wheeze, shortness of breath and weight loss were the six most common complaints of lung cancer (Table 1). Eighty-four

TABLE 1  
SYMPTOMATOLOGY IN 233 CASES

	Cases	Per Cent
Cough .....	196	84.1
Pain .....	139	59.7
Hemoptysis .....	102	43.8
Dyspnea .....	87	37.3
Weight Loss .....	64	27.5
Wheeze .....	52	22.3
Tenderness (Palpation) .....	25	10.7
Symptoms Unrelated To Chest .....	12	5.1
No Symptoms .....	8	3.4

per cent exhibited cough or a change in the cough habit as the initial symptom. The cough associated with lung cancer has no peculiar characteristics, but

the development of a smoker's cough in a middle-age individual who has previously smoked without a cough should be regarded with suspicion. Of equal importance is a change in the cough habit. The initial cough is likely to be dry and expulsive efforts are ineffective. Eventually the cough becomes paroxysmal in character and frequently is associated with a purulent sputum, indicating associated pulmonary infection.

Pain or chest discomfort was present in 139 cases and varied in intensity from a heavy feeling in the chest to that of severe and intractable pain associated with osseous or brachial plexus extension of the cancer. The pain may be fleeting in character but it shows a tendency to persist and recur. It may lead to a diagnosis of pleurisy, and such is a likely explanation for the pain; however, the possibility of cancer cannot be dismissed in patients over forty years of age with this symptom by a cursory examination.

Hemoptysis indicates ulceration of the tumor or bronchial mucosa and it cannot be considered an early symptom. It was present in 102 cases (43.8%), and rightfully disturbed the patient more than any other symptom. Massive pulmonary hemorrhage is extremely rare until late in the disease and the usual finding is a blood-streaked sputum. This symptom alone is indicative of cancer of the lung until proved otherwise.

A wheeze is frequently considered asthmatic in origin by both the patient and physician, but here again certain characteristics should arouse suspicion of lung cancer. Development of asthma late in life is not as common as cancer of the lung. The wheeze may be generalized or localized on either side of the chest, or it may be referred to a substernal location. The existence of a unilateral wheeze over the chest in a middle-age individual is strong presumptive evidence of lung cancer.

Shortness of breath was present in 87 cases (37.3%). It seemed to parallel the extent of interference with lung volume. Pleural effusion, lobar atelectasis, associated infection, and paralysis of the diaphragm are factors leading to dyspnea. Some patients complain of tightness in the chest or inability to take a deep breath. Although weight loss is not suggestive of any particular disease, it was noted in 64 cases (27.5%). Tenderness to palpation over the thoracic cage was present in 25 cases and 12 of these showed invasion of the ribs by cancer.

Cancer of the lung is frequently confused with tuberculosis and non-tuberculous chest diseases. Too often upper lobe lesions are considered tuberculosis, while lower lobe disease is considered bronchitis, bronchiectasis, virus pneumonia or lung abscess. Seventeen per cent of the patients in this series had lung abscess, and this finding in patients over forty years of age strongly suggests the presence of lung cancer. Any pulmonary infection which does not clear completely or show progressive improvement over a period of three to four weeks should arouse suspicion of cancer of the lung. Pneumonitis associated with lung cancer may respond to antibiotics, but incomplete resolution may well indicate malignancy of the lung. Treatment erroneously directed to unresolved or virus pneumonia may account for months of delay in the proper treatment of lung cancer. Bloody pleural effusion, metastasis to the supraclavicular lymph nodes, liver metastasis, cerebral metastasis, and involvement of the recurrent laryngeal nerve, sympathetic trunk, phrenic nerve or brachial plexus indicate lung cancer which has become hopelessly advanced.

The history, physical examination and roentgenography can only lead to a presumptive diagnosis of cancer of the lung, and other available methods for histologic confirmation of the clinical impression include sputum examination for tumor cells, bronchoscopy, and exploratory thoracotomy. Examination of pleural fluid for tumor cells, aspiration biopsy, biopsy of suspected lymph node extension, and biopsy of the chest wall or wall of a peripherally located lung abscess are methods primarily used for histologic confirmation of hopelessly advanced cancer (Table 2). The value of roentgenography can-

TABLE 2  
METHODS OF DIAGNOSIS 233 CASES  
CARCINOMA OF THE LUNG

	Cases
Bronchoscopy -----	106
Thoracotomy-Exploratory -----	55
Biopsy Lymph Node -----	18
Biopsy Chest Wall -----	6
Cytologic Examination of Sputum -----	6
Craniotomy-Unsuspected Brain Metastasis -----	5
Punch or Aspiration Biopsy -----	5
Tumor Cells Pleural Effusion -----	5
Biopsy Wall Peripheral Lung Abscess -----	3
Thoracoscopy (Biopsy) -----	1
Autopsy -----	23

not be over-estimated as a diagnostic method, either



in symptomatic or asymptomatic lung cancer. In the group of 233 cases herein reported, an x-ray diagnosis of primary lung cancer was made or strongly suspected in 90 per cent of the patients. The radiologic features of cancer of the lung may simulate any pulmonary disease. Usually there is a shadow of a peripheral or centrally located tumor mass. Lobar atelectasis, pleural effusion, broadening of the mediastinum by invasion or metastasis, bony thorax extension of the tumor, diffuse lobar pneumonitis, localized areas of pulmonary emphysema, lung abscess, interlobar or diffuse empyema and an elevated diaphragm are all frequently seen in cancer of the lung. If the lesion on the roentgenogram is suggestive of cancer of the lung, the patient should be subjected immediately to further diagnostic methods.

Bronchoscopy has long remained one of the most outstanding methods for confirmation of the clinical diagnosis of cancer of the lung (Table 3). Its value

TABLE 3  
BRONCHOSCOPIC EXAMINATION  
IN 213 CASES

	Cases	Per Cent
Positive .....	106	49.7
Negative .....	92	
Not Examined .....	35	

is limited to lesions arising in the major bronchi and it is of little value in the early asymptomatic cancer. In 8 silent cancers of the lung discovered by routine, x-ray of the chest or in surveys the bronchoscopic examination was entirely negative, whereas this examination was positive in 49.7 per cent of the 213 cases of symptomatic cancer of the lung. In addition to its diagnostic value, bronchoscopy plays an important role in determining operability by defining the extent of the local growth and by depicting the likelihood of subcarinal or paratracheal lymph node metastasis.

Confirmation of the clinical diagnosis of lung cancer by a study of the sputum or bronchial washings can be accepted only if the tumor cells have been identified by an expert. A positive cytologic diagnosis, when reported by a pathologist skilled in cytology, is as reliable as a positive biopsy and is diagnostic in from 50 to 60 per cent of those patients with symptoms. Its value in the early asymptomatic stage of lung cancer is questionable. In approximately 25 per cent of the patients with lung cancer it is impossible by means of our present facilities

to make a pre-operative morphologic diagnosis and recourse must be made to exploratory thoracotomy.

Fifty-five patients in this series with presumptive evidence of lung cancer and without pre-operative positive tissue diagnosis were subjected to exploratory thoracotomy for diagnosis and treatment. In early lung cancer the diagnosis, as a rule, can be established only by this method. It is impossible to differentiate a peripheral circumscribed tumor of cancerous origin from the various benign tumors or inflammatory masses which may simulate it (Fig. 2). The time factor is of so much importance in these patients that delay in recognition of the nature of the tumor may lead to disaster and exploratory thoracotomy should be resorted to early. One cannot wait for roentgenographic evidence of a change in the tumor or metastasis to the mediastinum before making a decision to explore the chest. The danger of exploration is negligible and comparable to a laparotomy for an ill-defined tumor of the abdomen. Unidentified tumors of the lung should be treated similarly to an unidentified breast tumor. Diagnosis of symptomatic cancer of the lung early and treatment of the uncovered asymptomatic lesion of the lung with dispatch will greatly improve our results and place cancer of the lung in the favorable position of cancer of the colon and rectum.

Roentgen therapy and radium have proved disappointing in both the curative and palliative treatment of primary cancer of the lung. More recently, mustard gas, either alone or in combination with x-ray therapy, and radioactive substances have been used; however, the results to date are not encouraging. The only hope of cure at the present time depends upon surgical extirpation of the lung, the regional lymph nodes and adjacent involved structures.

The advanced stage of cancer of the lung in this series of 233 cases is reflected in the operability rate (Table 4). The obvious extension of cancer beyond

TABLE 4 DISPOSITION 233 CASES OF LUNG CARCINOMA		
	Cases	Per Cent
Thoracotomy - Considered Operable ..	129	55.3
Resection Feasible .....	81	34.7
Lobectomy-Palliative .....	7	
Pneumonectomy .....	74	
Far Advanced - Inoperable .....	104	44.7

the lung contraindicated surgery in 104 cases (44.7%). In 129 cases preliminary studies indi-

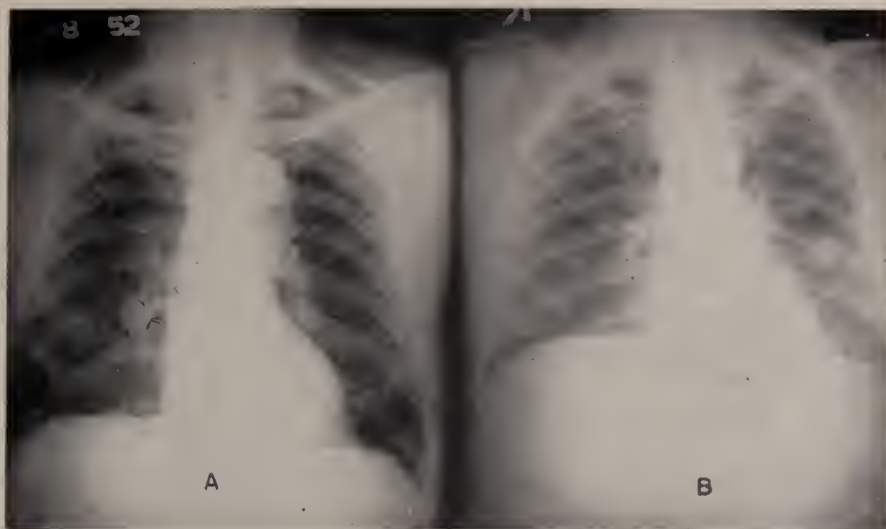


Fig. 2. A. 62 year old white male with a right hilar circumscribed tumor mass. B. 28 year old white male with a peripheral circumscribed tumor mass on the left. Diagnostic facilities failed to disclose nature of tumors. Which is malignant? Exploratory thoracotomy showed A to have a hamartoma, while B had an early peripheral small cell carcinoma of the lung.

cated that the lesion was confined to the thorax and probably operable. Evidence of extension of the cancer beyond the hope of cure accounted for prompt closure of the thorax without resecting a lobe or the lung in 48 cases. Pulmonary resection was possible in 81 cases, yielding an operability rate for the entire group of 34.7 per cent. Lobectomy was performed upon 7 occasions for palliation. Removal of the entire lung rather than a lobe, whenever possible, is in keeping with good cancer surgery. Of the 81 patients subjected to pulmonary resection, 13 died in the hospital (Table 5). It is not necessary to

mortality can be expected in accepting this type of individual for surgery. The majority of deaths associated with cancer surgery of the lung are a result of cardiac complications. Infection is no longer a serious problem.

Since leaving the hospital, 37 patients have died. Thirty-one patients are living and well. Of these patients, 6 have been well for more than 5 years, 2 for more than 4 years, 8 for more than 3 years, 3 for more than 2 years, 8 for more than 1 year and 4 under 1 year (Table 6).

TABLE 5  
RESULTS OF RESECTION 81 CASES  
CARCINOMA OF LUNG

	Cases	Per Cent
Hospital Deaths	13	16.1
Deaths Later	37	45.6
Living and Well	31	38.3

make excuses for the mortality rate because this will range anywhere from 3 to 20 per cent depending upon the type of patient accepted for operation. Eight patients had previous attacks of coronary thrombosis which was confirmed at operation and 3 had a history of repeated attacks of angina pectoris. Seven patients had simultaneous block resection of the chest wall at the time of pneumonectomy, and 2 patients had pneumonectomy and block excision of the chest wall following previous drainage of lung abscesses to the exterior. A higher

TABLE 6  
SURVIVAL PERIOD OF 31 PATIENTS LIVING AND WELL  
FOLLOWING RESECTION FOR LUNG CANCER

	Cases
Under 1 Year	4
1 to 2 Years	8
2 to 3 Years	3
3 to 4 Years	8
4 to 5 Years	2
Over 5 Years	6

Progress in the treatment of lung cancer has reached its anatomical limits as far as surgery is concerned, and further progress in this field depends upon earlier diagnosis and treatment by surgical exploration of the chest of those patients who show suspicious roentgenographic evidence of cancer.

#### CONCLUSIONS

1. The more effective control of lung cancer demands that all physicians in active practice

be familiar with its symptoms and maintain a high degree of suspicion of its possible presence in those patients who present atypical pulmonary complaints.

2. There are no characteristic symptoms of lung cancer but careful evaluation of pulmonary complaints singly or in combination and referral of such patients for chest roentgenograms will lead to an accurate presumptive diagnosis in approximately 90 per cent of the patients. Asymptomatic lung cancer generally indicates an early growth and can easily be recognized by roentgenograms of the chest.
3. Positive tissue diagnosis of lung cancer can be established by bronchoscopy, examination of the sputum for tumor cells and by exploratory thoracotomy. In one out of four patients with lung cancer suitable for curative pulmonary resection it is impossible by means of our present facilities to make a pre-operative

morphologic diagnosis, and recourse must be made to exploratory thoracotomy.

4. The late diagnosis of symptomatic lung cancer and the infrequent recognition of early lung cancer in its asymptomatic stage has limited surgery in its successful application to carcinoma of this organ.
5. Further progress in the treatment of lung cancer depends upon early diagnosis and surgical exploration of the chest of those patients who show suspicious roentgenographic evidence of cancer.

#### REFERENCES

1. Coleman, F. P.: Primary Cancer Of The Lung, Virginia M. Monthly, **74**:215, May, 1947.
2. Haag, Harvey B.: Personal Communication.
3. Steiner, P. E.: Incidence Of Primary Carcinoma of The Lung With Special Reference To Its Increase, Arch. Path. **37**:185, March, 1944.

*810 West Franklin Street.*

#### Health of Workers Subject of AMA Congress.

Ways of keeping well workers well and on-the-job are among the topics to be considered by representatives of labor, management and medicine at the 14th annual Congress on Industrial Health. Sponsored by the AMA's Council on Industrial Health, the Kentucky State Medical Association and a number of additional national and regional groups interested in health and safety for the smaller industrial plant, the meeting will be held February 24-25 at the Brown Hotel, Louisville, Ky.

In addition to the above subjects, the program also

will be devoted to consideration of the control of emergencies in industrial plants and the community as well as other technical problems of current interest in the industrial health field. Two special features will be a workshop on emphysema with reference to coal miners and a conference on union and management sponsored health centers.

A pre-conference planning session will be held Feb. 23 for chairmen of state medical society industrial health committees and Council members to review progress during the past years and to determine future action.



## ALEXANDER HUMPHREYS, M.D.—1757-1802\*

RICHARD P. BELL, M.D.,  
Staunton, Virginia

Today is an important one in the medical history of this city and county. The dedication this afternoon of the new King's Daughters' Hospital will, we believe, usher in for us a new era in medical practice; and on this day, when we are looking forward with so much hope and so much confidence, our Medical Society chooses also to look backward over a long period of time to the years between 1757 and 1802. This was the short life span of the man in whose honor we are here gathered. Who was this Dr. Alexander Humphreys and what did he do to warrant this long retrospect?

Alexander Humphreys was born in County Armagh, Ulster Province, in the north of Ireland, in 1757, being one of a family of ten children. His people were prosperous, well-educated members of the so-called Scotch-Irish race. That term, I claim, is a misnomer. These people were pure Scotch, transplanted to the north of Ireland by the forces of economic, political and religious adversity; and though living in Ireland, pure Scotch they remained. They neither intermarried nor intermingled with the native Irish; and now, after four hundred years, those who remain in Ireland of that Scotch-Irish race are still pure Scotch.

Of Alexander Humphreys' boyhood, we know little except that he received the best schooling available. His people were highly religious and of strictest Covenanter type. His mother's brother, Dr. Carlisle, was a well-known medical practitioner nearby; and young Alexander, having decided in his early youth on medicine as a profession, in due time became the pupil of his uncle. Those were the days of Preceptorships, when medical students read medicine and secured practical instruction in the homes and offices of successful practitioners. This tutelage continued from two to four years; and after this time some students entered directly into private, independent practice. Others transferred to medical schools, which were few in number, and there finished their education under eminent professors, many of them receiving finally the M.D. degree, but a

considerable number entering practice with no degree. Alexander Humphreys, after absorbing all the medical lore Dr. Carlisle could impart, betook himself across the narrow waters and enrolled at the University of Edinburgh, then the most famous medical school in the world. After three years he graduated with the degree of Doctor of Medicine. By this time he had attained the age of twenty-five. The lure of America which was affecting so many of his countrymen began to draw him and he decided at about the termination of the Revolutionary War to emigrate to Virginia. The Scotch in Ireland were no lovers of England, and Humphreys doubtless heartily sympathized with the American Colonies and rejoiced in their triumph over the mother country. In fact, he had an older brother in Virginia who had lived in Augusta County near Greenville since 1764, and who had fought in the American Army. This brother, David Carlisle Humphreys, had become an influential citizen of the county; he had married a distant cousin, Miss Finley, and they had raised a large family of boys and girls who had intermarried with leading families in the county. Many descendants of David Carlisle Humphreys still live in this area.

And so young Alexander, with his new medical degree and much enthusiasm, emigrated to the New World, came directly to Augusta County and settled near his brother's home. He lived and practiced in the county between the years 1783 and 1787. The latter year found him in Staunton, lured hither by the greater opportunities offered by residence in the county seat and largest town west of the Blue Ridge.

And what sort of place did he find himself in when he moved here? A frontier town of about eight hundred people, one-fourth of them colored slaves; one church, the parish church of the county. The block surrounding this church had been presented in 1750 to the county by William Beverley. The cemetery was the community burying ground and was so used by all denominations and races until 1850 when it could hold no more graves. There were from fifteen to eighteen stores in the town, and seven inns. Staunton was at the crossing of two important highways and in those days of great migration to the

\*Address delivered before the Augusta County Medical Association on the occasion of the dedication of a bronze tablet at the grave of Dr. Humphreys in Trinity Churchyard, Staunton, Virginia, April 15, 1951.

west and south, many travellers stopped here. There was a courthouse, a primitive prison, a whipping post and a ducking stool, the latter never having been used because there was insufficient water in Lewis Creek to operate it. There were three doctors in the town besides Dr. Humphreys: William Groves, Hugh Richie and Alexander Long. Of them we know little. Richie was a Frenchman who had come over with the French troops who fought in the Revolution. There were no four-wheeled vehicles in Staunton, and only two gigs, or two-wheelers. Neither of these was owned by a doctor, so we conclude that these four were doctors on foot, sometimes on horseback. We have interesting but unflattering descriptions of the Staunton of that period written by two foreigners, an Englishman named Isaac Wald, and a Frenchman by the name of Rochefoucauld. From their accounts we learn that there were about two hundred houses in the town, mainly built of stone; that military titles and uniforms were very numerous; that gambling and betting were prevalent; that the food markets held twice weekly were exceedingly poor and that the horse races were miserable. Also, that the manners of the people were about like those of Richmond, whatever that may have implied. There was no post-office until 1793. The town was governed until 1802 by Trustees elected by the freeholders.

Into such a town moved Dr. Alexander Humphreys in 1787, four years after peace had been concluded with England. He was then thirty years of age. The following year he married Mary, the fourth child of the Reverend John Brown of New Providence Church, the first Presbyterian minister of Rockbridge County, and a man of outstanding character, education and intellect. Dr. Brown had a marked effect for good in his community. Beside his great work in his Church, he established and taught the first school in this part of the Valley of Virginia. Four sons and two daughters were born to Alexander and Mary Humphreys.

Searching for information about Dr. Alexander Humphreys, we find references to him in court records, deed books, various medical histories of his time, in government archives, in private letters and other sources. Pieced together, these records and references, all too few, seem to present the picture of a man whose short life had three distinct aspects:—his life as a citizen in a growing pioneer town; his

life as a busy doctor; and his life as a teacher of medical students.

As a citizen of his new home, he soon came into prominence. We find him in 1790 helping to organize a Fire Company. Along with about forty of the leading business and professional men of the town, he became a member of that highly important organization. We next find him appointed by the court to a committee of five prominent citizens to report on plans for a new jail. We have records of his buying and selling numerous pieces of real estate in the town and in this and adjoining counties. We note his appointment, in 1791, as Gentleman Justice of the Peace. In 1792, with twelve other leading men, he was appointed by the Legislature as Trustee of the Staunton Academy, the first school established in the town. He was elected first president of its Board, and the following year we read of his serving on a committee of three Trustees to examine an applicant for the chair of Latin and Greek in the new school. During Dr. Humphreys' life-time this Academy was housed in rented rooms; but the year of his death saw the construction of a large brick school-house on the northeast corner of New and Academy streets, which stood until about forty years ago. Dr. Humphreys served on a court of Gentlemen Justices, acting as a grand jury which indicted John Bullitt for horse-stealing, for which capital crime this unfortunate man was hung at the place of execution located by the court at the intersection of New and Augusta streets in the then northern limits of the town. From this fact, that part of Staunton was for many years known as Gallows Town.

As a practitioner of medicine, Dr. Humphreys appears to have soon become exceedingly busy and increasingly well-known throughout the town, the county and adjoining counties. His name appears in numerous court records attesting wills of prominent citizens, certifying the fitness of midwives to perform their duties, examining Revolutionary War pensioners. Some of these latter records show his intimate knowledge of anatomy. In 1793 he found it necessary to employ an apothecary to assist him with his work. Accordingly, he wrote to Edinburgh and secured the services of one George C. McIntosh, making a contract with him for a period of four years. McIntosh after one year defaulted on the agreement and entered practice independently, advertising his services to the public, claiming to have



graduated at Edinburgh and to have studied under the great Dr. Monroe. Humphreys sued him for breach of contract, but the suit was dismissed at the cost of the defendant. In 1788, soon after his arrival in Staunton, Humphreys petitioned the court for permission to erect an "elaboratory" on the prison lot. Permission was granted and he accordingly built a workshop at about the site of the present jail. Here he compounded drugs and carried on dissection for his own benefit and for that of his students. His own office and rooms for instructing students were also located in this building. His fame spread, he was sent for by doctors at a distance in consultation over difficult cases. One of these consultations of which we know was historic. Dr. Jesse Bennett, a graduate of the University of Pennsylvania, had settled in Rockingham County at the village of Edom. On January 14, 1794, his own wife was in labor with her first child. The labor was prolonged and unproductive, and Dr. Bennett, becoming alarmed, dispatched a messenger for Dr. Humphreys. On his arrival, the two endeavored in every way to bring about a successful delivery, attempting to apply forceps several times. The pelvis was found to be contracted and normal delivery impossible. Two procedures were then discussed: first, craniotomy, with destruction of the child; second, Cesarean section, an operation never performed on a living woman up to that time. Dr. Humphreys advised against the Cesarean operation and advocated craniotomy. Mrs. Bennett, the patient, then spoke up and begged for the Cesarean section, saying that she felt sure she would die under either procedure and wanting the life of the child saved. Dr. Bennett then requested Dr. Humphreys to operate, but he most positively declined to do so. Bennett then decided to attempt the job himself and accordingly, on a table of two planks resting on barrels, with two Negro women holding the patient and a huge dose of laudanum the only anesthetic, this heroic man proceeded to perform the first Cesarean section in history on a living woman, and, remarkable to relate, both mother and child survived and lived, both of them to old age. Dr. Bennett has not been accorded the place in history which he deserves, because he failed to report the case in medical literature. When asked by his colleagues why he failed so to report it, he replied that there were two reasons—First, no decent man would report

such an operation on his own wife; and, second, his medical friends already knew of the operation and that doctors who didn't know him would never believe him if he reported it, and he was not going to give them the opportunity to call him a liar. This operation has since been duly authenticated and recorded by other doctors. It antedated Ephraim McDowell's ovariectomy by fifteen years. Incidentally, double ovariectomy was done by Dr. Bennett as part of the operation.

But it is as a teacher that the name of Alexander Humphreys has persisted for one hundred and fifty years in medical history; and it is mainly for his achievements as a teacher of medicine that we honor him here at his grave today. He attracted students from near and far. How many young men studied under him as preceptor, we do not know. Immediately after his death in 1802 his whole family moved to Kentucky and his records were either destroyed or taken along by the family. It is inconceivable that a man of his ability kept no records of any sort. Let us hope that there are records and that one of his six children preserved them and that they may some day come to light.

Out of the group of young doctors that Dr. Humphreys trained, there were five of whom we know who attained eminence of one sort or another. William Wardlaw, one of his first students, studied here more than two years, then emigrated to Tennessee and became famous in the early medical history of that new state. William Wardlaw and another student, James McPheeters, unwittingly brought trouble upon their preceptor. The remains of a human body which they had caused to be exhumed and had used for dissection, were sewed up by them in a crocus sack and deposited in a cave on Sear's Hill. The sack had the name of Dr. Humphreys on it; and after being found and inspected, a grand jury investigation was held. A traveller had disappeared from one of the town taverns and murder was suspected. The grand jury, on hearing the testimony of the students, acquitted Dr. Humphreys; but rumors spread to other towns and he had much worry and unhappiness and several law-suits in connection with the case.

Another student was Andrew Kean of Goochland County. He afterwards made a name for himself as a physician in his home county. He was chief surgeon of the Eighth Regiment of Virginia Militia

in the War of 1812. He became more and more eminent as a doctor after this war and was offered a chair in the medical school of Thomas Jefferson's new University of Virginia. He declined the offer and continued in private practice.

William Henry Harrison, ninth President of the United States, in his youth started to study medicine under Dr. Andrew Leiper of Richmond. He then came to Staunton and continued his studies under Dr. Humphreys. Then he entered the University of Pennsylvania and was there when his father, Benjamin Harrison, of Charles City County, died. William Henry Harrison then gave up medicine and entered the Army, rising in rank to General. He defeated the Indians at the famous battle of Tippecanoe Creek and soon thereafter was elected President, defeating Martin Van Buren. He died one month after his inauguration and was succeeded by Tyler, his vice-president and a fellow Virginian.

Samuel Brown, younger brother of Dr. Humphreys' wife, was also a medical pupil of his brother-in-law. He studied in Staunton three years and then entered the University of Edinburgh, where he remained two years. He did not graduate, but returned to America in 1795. He tried out several locations, near Washington, in New Orleans, in Alabama, and, finally, he settled in Lexington, Kentucky. He was the pioneer vaccinator of America. Four years after Jenner's famous discovery, Samuel Brown had vaccinated successfully more than five hundred persons in Kentucky. Vaccination was still being only tentatively used at that time in the large cities of the East. Brown became professor of medicine in Transylvania University in Lexington, Kentucky, the first medical school west of the Alleghanies. He was also a scientist and contributed to scientific magazines. He wrote the first medical paper published by a Kentucky doctor. He also had the distinction of introducing lithography into America.

Last, and most famous of Dr. Humphreys' pupils, was Ephraim McDowell. Born in Rockbridge County just south of Fairfield, he moved to Kentucky with his family at the age of twelve. His father became one of the first judges in the new state. At the age of nineteen, Ephraim returned to Virginia and enrolled under Dr. Humphreys. After three

years here, his teacher persuaded him to finish his education in Edinburgh. He remained there two years but did not graduate. He was mainly interested in surgery and was greatly moved and influenced by the famous Edinburgh surgeon and anatomist, John Bell. Returning to America in the late summer of 1794, he remained in Staunton until January, 1795, when he returned to his home in Danville, Kentucky. There he accomplished his amazing and revolutionary work in surgery, acquiring the title of Father of Ovariectomy and Founder of Abdominal Surgery. His work is too well known and reported to be further commented on here.

How are we to appraise and evaluate the worth of this man, Alexander Humphreys, one hundred and forty-nine years after his passing?

I submit that he was a doctor and a teacher far ahead of his times, and that he carried the torch of medical learning with honor to himself and benefit to humanity. It is pleasant to think that he may know of this gathering here today to do him honor; but whether he does or whether he doesn't, I would say to him:—"Dr. Humphreys, your successors in medicine after many years salute you; and it is our prayer that your great energy, your keen intellect and your abounding zeal to learn and to teach may so inspire us that we may become better and more useful practitioners of the art of healing."

#### REFERENCES

1. Biography of Ephraim McDowell: Mary Young Ruttenbaugh. W. J. Donovan; Philadelphia, 1887.
2. Supplement to Kentucky Medical Journal, **33**: No. 9, September, 1935.
3. Medicine in Virginia, Wyndham Blanton.
4. Annals of Augusta County, J. Addison Waddell.
5. Doctors on Horseback, Flexner.
6. Surgery, Queen of the Arts, William Haggard.
7. Historic Families of Kentucky, Thomas Marshall Green.
8. Scotch-Irish Influence, Ann. of Med. Hist., 1938, N.S., X: 71-82, 162-168, H. H. Trout.
9. Augusta County Court Records, Lyman Chalkley.
10. Humphreys Family in America, Frederick Humphreys, M.D., Humphreys Print; New York, 1887.
11. Augusta County Deed Books; Augusta County Will Books; Augusta County Order Books.

*211 West Frederick Street.*

## THE TOTAL APPROACH TO THE DIAGNOSIS OF PULMONARY TUBERCULOSIS\*

CARL W. LaFRATTA, M.D.,

Medical Superintendent, Pine Camp Hospital; Director  
Chest Clinic Services, Richmond City Health Department;  
Associate in Medicine, Medical College of Virginia,  
Richmond, Virginia.

There has been a definite tendency over the years to arrive at the diagnosis of pulmonary tuberculosis in many instances on too little evidence. This has often been true even in those cases where the findings at the time seem very convincing towards such a diagnosis. Considering the serious impact that a diagnosis of pulmonary tuberculosis may bring about socially, emotionally and economically, it is incumbent upon all practitioners to substantiate the presence of this disease beyond question whenever possible.

The various campaigns for the early diagnosis of pulmonary tuberculosis through x-ray surveys have brought about a gradual change in the type of case needing hospitalization. Ten or fifteen years ago, a patient would consult his physician because of symptoms such as loss of weight, fever, cough, night sweats, expectoration of blood and others. He then may have been referred to a tuberculosis sanatorium following an x-ray of his chest. At the present time the sequence of diagnostic procedures is likely to be reversed. An increasingly large proportion of patients are recommended for admission because of the findings on x-ray alone. These findings need not be solely confined to those resulting from mass x-ray studies but may occur in cases of individuals who are sent for x-ray of the chest for any reason such as might be recommended during a thorough clinical investigation. Quite a few of such cases are found to be non-tuberculous in character following varying degrees of investigation after hospitalization, for the expert roentgenologist and chest specialist will be the first to admit today that the diagnosis of tuberculosis from x-ray evidence alone is by no means infallible.

Garland<sup>1</sup> has enumerated 89 different conditions which in his experience and otherwise have been confused roentgenographically with pulmonary tuberculosis. This figure is rather astounding and it is assumed that every condition he has listed is

not misdiagnosed *very frequently* as tuberculous. However, there are a certain group of entities that can be easily confused on x-ray with pulmonary tuberculosis. Some of the more common examples include virus pneumonitis, some cases of bronchopneumonia and lobar pneumonia, lung abscess, bronchiogenic cancer, fungus infections and occupational disease. Thus, the practitioner today finds a definite challenge in cases presenting positive findings following x-ray of the lungs. His first consideration should be the substantiation of his impressional diagnoses of pulmonary tuberculosis by employing the accepted clinical and laboratory methods at his disposal. The plea in this report is that we strive for a well rounded approach to the diagnosis of this disease and, in order to substantiate our diagnosis, then we attempt to produce all the accepted criteria possible in those cases where there is any question involved. An attempt will be made here to discuss the relative merits of the various diagnostic procedures for pulmonary tuberculosis and to reveal the pitfalls which can arise in their application.

Essentially four basic procedures or steps are necessary to establish the diagnosis of active pulmonary tuberculosis. They are:

STEP	METHOD
(1) Prove tuberculous infection.	Tuberculin test.
(2) Prove existence of a disease focus in the lung.	History, symptoms, physical examination, x-ray.
(3) Prove this focus to be tuberculous.	Demonstration of tubercle bacilli in the sputum or gastric contents.
(4) Prove that this focus is active.	Finding of tubercle bacilli; changes in serial roentgenograms; presence of symptoms referable to the pulmonary focus.

\*Read before a Joint Meeting of the Virginia Academy of General Practice and the Virginia Chapter of the American College of Chest Physicians on May 6, 1953.



### TO PROVE TUBERCULOUS INFECTION

*Tuberculin Testing.* The tuberculin test is usually the last procedure undertaken towards the diagnosis of tuberculosis in this day and time, if it is undertaken at all. It is indeed surprising how prevalent is the neglect to use this simple but reliable test in this modern era. Nearly all persons with either latent or active tuberculous infection react positively to tuberculin except when ill and toxic from advanced disease, often terminal, from miliary involvement, or when one of the infectious exanthemata is present. A positive reaction indicates the presence of a tuberculous focus in the body but, of course, does not distinguish between an active or an inactive lesion of a re-infection type in the lung. Except in the first few years of life, a positive tuberculin reaction is of very limited value in establishing a diagnosis of *clinical* tuberculosis. On the other hand, a negative intracutaneous reaction, particularly to a 1:100 and especially a 1:10 dilution of old tuberculin, practically excludes the existence of tuberculous infection at any age.

There is much difference of opinion as to the dilutions of old tuberculin to be used. At the Chest Clinic of the Richmond City Health Department it is the practice to begin with a 1:10,000 dilution of old tuberculin and then, if there is no reaction, to carry the tests through a 1:1000 dilution, and then a 1:100 dilution; in occasional cases a 1:10 dilution is found necessary. So far, in using this system, there have been no recognizable discrepancies between impressions gained by skin testing and the clinical picture. As a matter of interest, Woodruff<sup>2</sup> disclosed that in routine tuberculin testing of sanatorium admissions the proportion of positive sputum cases increased with lowered dilutions until a maximum of 66.7% was reached in the group positive to a 1:100 dilution of tuberculin.

When dealing with a suspected case of pulmonary tuberculosis the tuberculin test should always be done and, as mentioned above, may exclude the disease when negative. When the test is positive and when there is yet no corroborative evidence at hand, it is merely additional information on the positive side which will enter into the final analysis of the case.

### TO PROVE THE EXISTENCE OF A DISEASE FOCUS IN THE LUNG

*History.* Of what value is a history in the diagnosis of pulmonary tuberculosis? Not unlike the

case of many other diseases, there are certain facts which, when existent in the history, hasten the physician to entertain the diagnosis of pulmonary tuberculosis. As examples, previous confinement in a sanatorium, or a statement from the patient about a previous diagnosis are both extremely significant. Previous pleurisy with effusion, hemoptysis, and spontaneous pneumothorax all have varying significance. We know now, for example, that spontaneous pneumothorax, especially in young people, is most often *not* caused by pulmonary tuberculosis. Hemoptysis is no more a cardinal symptom of the disease since bronchiectasis and bronchial erosion are now believed to be more common causes. On the other hand, pleural effusion in the young is most often of a tuberculous etiology. Family history is believed of importance and so-called "contact" history is equally if not more important. All practitioners, however, should bear in mind that there may be none of these items entered in the history of a given case. We know, for example, that only about 30% of cases in the Richmond area give a definite contact history, and about the same percentage give a family history of this disease. The lack, however, of the above significant features of a history, and especially contact and family history, should have no influence at all when we are dealing with a suspected case of pulmonary tuberculosis.

*Symptoms.* In many cases of pulmonary tuberculosis, the frequent absence of symptoms, or at least of symptoms alarming enough to send the patient to the physician, is well known in this day. However, these patients are not *all* asymptomatic. Any deviation from optimal health existing for several weeks must arouse suspicion unless satisfactorily explained by other definite findings. Many cases of pulmonary tuberculosis would be diagnosed months or even years earlier if it were not so frequently assumed that fatigue, poor appetite, chronic anemia, vague gastro-intestinal disturbances, weight loss and a score of others occur commonly without organic disease. It should be realized that such symptoms can be manifestations of active tuberculosis. Such a diagnosis as chronic bronchitis, for example, often conceals the presence of tuberculosis, bronchiectasis, or bronchiogenic carcinoma. Remember, there are no classic symptoms of pulmonary tuberculosis in this day; rather, there is an infinite variety which may or may not be present.

*Physical Examination of the Chest and X-ray.*

The presence of abnormal physical signs is of unquestioned value in the diagnosis of lung disease, but the lack of such signs does not indicate the absence of disease. Advanced pathologic changes may be present in both lungs without demonstrable physical signs. Disease of the bronchial elements is apt to be productive of an abundance of auscultatory signs, while disease of the alveolar elements often exhibit a paucity of such signs. Fellows<sup>3</sup> compared the roentgen and physical signs of 280 patients with early tuberculosis. Abnormal physical signs were present in only 21%. Sampson and Brown<sup>4</sup> reported that in 392 cases with advanced pulmonary tuberculosis with cavity on x-ray, in only 15% were there physical signs suggestive of cavitation. In spite of the lack of correlation between roentgenographic and physical findings, we *must* utilize physical examination of the chest as one of our methods in the detection of the disease. In many instances the existence of a pathological focus in the lung can be proved this way. There is an apparent trend in the younger graduates, however, to almost completely disregard physical examination of the chest as being of any real value towards the diagnosis of lung lesions. This is definitely a wrong tendency. There will be many times wherein physical examination is all we may have at our disposal as a method of diagnosis, such as in the home in an isolated rural area, for example; then, the patient at home may not be in an ambulatory condition. Therefore, all the information we can possibly obtain at the bedside is necessary in order to proceed with an optimum plan in the handling of the case. However, the absence of a tuberculous focus in the lung can never be *proved* without an x-ray examination of the chest. It should be mentioned here that the use of the fluoroscope is not only completely inadequate for the detection of early disease, but can be a menace by instilling a false sense of security. Like physical examination, fluoroscopic examination should always be followed by roentgen examination. Today we accept the x-ray as the best single method of diagnosing early tuberculous lesions. We must remember, however, that this is true only provided we accept the shadows disclosed by such an examination as tuberculous in these questionable cases, or better, if we set about substantiating such shadows as being truly of tuberculous etiology. It is now obvious that x-ray of the chest has serious limitations and, as mentioned above, we now know that a great many

persons who have been diagnosed tuberculous had other pathologic conditions that produced shadows indistinguishable from those cast by tuberculosis. It is believed permissible that the x-ray supersede other investigative procedures in locating the disease, but to attempt to carry the x-ray beyond this point in a great many instances, is to enter the field of speculation in diagnosis. At the same time, it must be realized there are a reasonable number of instances in this day whereby the pattern as presented on x-ray of the chest is so classic and so typical to the trained observer that one should be willing to accept the case as being tuberculous pending corroborative evidence bacteriologically and otherwise.

#### TO PROVE THAT THIS FOCUS IS TUBERCULOSIS

*Demonstration of Tubercle Bacilli in the Sputum or Gastric Contents.* The finding of tubercle bacilli in the sputum is specific for the diagnosis of pulmonary tuberculosis. It must be remembered, however, that the microscopical method of examination alone cannot distinguish between tubercle bacilli and other types of acid-fast bacilli. Besides saprophytic acid-fast bacilli of the microbacterium group, which are widespread in hay, straw, dust, animal litter, soil and water, there are a number of other organisms, such as the leprosy bacillus, Johne's bacillus and some species of antinomycetes which are acid-fast and occasionally give rise to confusion.<sup>5</sup> In many cases, a single positive direct smear for acid-fast bacilli should not be enough to label a questionable case pulmonary tuberculosis unless accompanied by characteristic x-ray pattern, a positive tuberculin test and the clinical picture of tuberculosis. Excepting in rare cases, no one should be hospitalized for pulmonary tuberculosis on the basis of sputum reports alone, as had often been done. In respect to sputum cultures, we must remember that many competent bacteriologists admit a possible error up to 5% in the interpretation of such cultures. It is not intended here to question the value of sputum examination in any respect whatsoever, but rather to call attention to the possible pitfalls which can arise in the utilization of the examination of the sputum and even gastric contents in selected cases.

In respect to examination of the gastric contents for tubercle bacilli, following gastric lavage, even though this procedure may not be practicable in all situations, it should be realized that the routine use of this technique will lead to an overall increase



of "positives" by about 20% to 25%. There are certain instances when the examination of the gastric contents for tubercle bacilli should definitely be resorted to. For example, patients with scanty sputum will swallow it in many instances. This is a common occurrence in women and children. When the matter of early differential diagnosis is of utmost importance, we should examine the gastric contents for tubercle bacilli routinely in face of negative sputum examinations. Similarly, there are singular cases when guinea pig inoculation should be resorted to, such as when the clinical and roentgenological findings do not correlate with the sputum reports.

In an attempt to prove a lung lesion tuberculous, it is recommended occasionally that streptomycin be given a patient who has an undiagnosed lesion of the chest. If, under this plan, the lesion improves in two or three months, this suggests its tuberculous nature. From a scientific standpoint, one would have to look far for a more ridiculous procedure.

There are too many instances in which repeated sputum examinations were done even up to twenty to thirty in number, including cultures with negative results, and the observers were not too willing to accept that the case was non-tuberculous. It is to be remembered that sputum examination with negative results is frequently one of the most important criteria by which we may exclude the diagnosis of pulmonary tuberculosis and to assist us in arriving at a correct diagnosis.

#### TO PROVE THE LESION IS ACTIVE

*Finding of Tubercle Bacilli; Changes in Serial X-rays; Presence of Symptoms Referable to the Pulmonary Focus.* For all practical purposes the finding of tubercle bacilli in the sputum or gastric contents is *prima facie* evidence of activity of the tuberculous lesion under investigation. Many fail, however, to think in terms of degrees of activity as indicated by the sputum findings. In estimate, there should be present, for example, 100,000 bacilli per cu. mm. to obtain a positive direct smear, and from 10 to 100 bacilli per cu. mm. to obtain a positive culture. The very active, so called open, and especially the cavitory case, should be almost repeatedly positive upon direct smear. Almost at the other extreme, there is the arrested case that may give only an occasional positive culture.

In many cases, the attempt to determine the ac-

tivity of established tuberculous lesions by a single x-ray examination is preposterous and the tremendous value of serial roentgenograms whereby the changing characteristics of lesions can be watched photographically is to be stressed. There can be a serious pitfall in this technique, however. One should never be satisfied with the comparison of merely two successive films in a series; rather, the initial examination film always should serve as the base line when one really wants to know what has happened to a lesion in a period of weeks, months or even years.

If one can be satisfied that the tuberculous patient's symptoms are referable to his disease focus, in many instances, pending other studies, this fact should arouse the suspicion that there is an active lesion. It isn't often, however, that definite symptoms ascribable to the lung lesion are present without some other clinching evidence for activity, such as positive sputum or roentgenographic changes.

#### SUMMARY

Tuberculin testing is not employed as widely at present as it should be towards the diagnosis of tuberculosis. Even though tuberculin positively admits of reinfection or primary tuberculosis, it is, of course, of no value in locating or determining the extent of the lesions, in differentiating primary from reinfection disease, or in detecting the presence of clinical disease. On the other hand, tuberculin makes it possible to distinguish between infected and non-infected individuals because only the former react to the test.

An adequate history of the patient, a higher index of suspicion on the part of the physician when the patient presents vague symptoms, and physical examination may aid the practitioner in substantiating a disease focus in the lung. However, the absence of tuberculous lesion can never be proved without an x-ray examination of the chest.

Microscopic examination of the sputum and sputum cultures should be done as a further aid towards diagnosis and activity of the lesions. Excepting rare instances, hospitalization should not be determined on the basis of sputum reports alone, however. On the other hand, in many cases, negative sputum examinations can help to exclude the diagnosis of pulmonary tuberculosis and can enable the arrival at a correct diagnosis.

Serial x-ray examinations are a valuable means

toward establishing activity of a lesion in question, but one should always remember to use the first x-ray in a serial as a base-line for the comparison of subsequent films.

Particular emphasis should be given to the importance of a well-rounded approach to the diagnosis of pulmonary tuberculosis in any case when there is doubt or question involved. One must bear in mind the possible social, emotional and economic impact such a diagnosis may entail. Hence, every means of diagnosis should be utilized in case of doubt.

#### BIBLIOGRAPHY

1. Garland, L. H.: Conditions to be Differentiated in the Roentgen Diagnosis of Pulmonary Tuberculosis. *Ann. Int. Med.* **29**:378 (1948).
2. Woodruff, C. E.: On the Verification of the Diagnosis of Tuberculosis. *Pub. Health Rep.* **63**:184-189 (1948).
3. Fellows, H. H.: The Incidence of Pulmonary Tuberculosis Among Applicants for Employment—1928-1936. Brochure of Metropolitan Life Ins. Co., New York City.
4. Sampson, N. L., and Brown, L.: Correlation of Clinical and Roentgenological Observations in Pulmonary Tuberculosis. *Radiology*, **22**:1 (1934).
5. Topley and Wilson: Principles of Bacteriology and Immunology, 3rd Ed. II:p. 1321, Williams & Wilkins & Co., Baltimore (1946).

---

#### Health on the Radio.

Demand for AMA radio transcriptions on common health subjects hit an all-time high during 1953. During the year more than 700 sets were distributed for broadcasting over local radio stations in all parts of the country. Assisting the Bureau of Health Education in distributing these health education platters and promotional material are 14 distributing centers set up by 13 state medical societies and the Alaska Department of Health. The Pennsylvania Medical Society, for example, arranged 1,989 local programs in 1953 and the Louisiana State Medical Society 1,157.

One of the most popular series was "Heart of America," which presents 13 case reports from outstanding cardiologists. Other popular new series include: "Chats with the Champs," "Help Yourself to Health," "Yours for Health," and "June, July and August."

These transcriptions are provided without charge by the AMA as a public service for medical societies and woman's auxiliaries. Universities and high schools, state and local departments of health, various voluntary health agencies and allied health organizations, such as heart and cancer societies, often request these transcriptions and sponsor them locally. Such requests always are cleared through the local medical society.

#### Television Films

Are now available to state and county medical societies where arrangements can be made for showing them. Representatives of societies should call on TV station managers and interest them in the four programs now available which are of exceptional quality and informative. For information in regard to the programs, write TV Film Library, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

## CONGENITAL DIAPHRAGMATIC HERNIA— A Report of Repair 17½ Hours After Birth

MARCELLUS A. JOHNSON, III, M.D.,  
Roanoke, Virginia

Congenital diaphragmatic hernia has been considered to be fairly rare but is now recognized more and more frequently. We believe it to be an important cause of newborn deaths.

Most surgeons who have written on the subject of congenital diaphragmatic hernia have emphasized early recognition and early repair. Ladd and Gross<sup>1</sup> and Donovan<sup>2</sup> maintain that these infants will endure surgical intervention exceptionally well, even shortly after birth. Baumgartner and Scott<sup>3</sup> say it is imperative that in the presence of post-delivery cyanosis and dyspnea the possibility of diaphragmatic hernia be checked by prompt X-ray study and early surgery instituted if a hernia is found. Harrington<sup>4</sup> says that if this type of hernia is found at birth it should be treated immediately by surgery.

Thus, in the newborn, operation should not be delayed in the hope of improving the child's condition before surgical intervention is undertaken. Such expectant treatment has been followed by an exceedingly high mortality rate<sup>5</sup>. Nevertheless, in the face of all these recommendations for early surgery, only one patient less than 22 hours of age who was operated on could be found in the English language literature, and he died<sup>6</sup>. In 1940, Hartzell<sup>7</sup> collected from the literature all of the cases operated on in children under 10 years of age. He found 68 cases, and the youngest operated on at that time was 41 hours old. The mortality rate in this group was 50% for those under one year of age. Tolins<sup>8</sup> reviewed the literature in 1952 and reported that 76 cases of congenital diaphragmatic hernias in infants under one year of age had been operated upon successfully. His personal case was 22 hours old. All articles written on this subject emphasize that a large majority of the hernias occur on the left side, and most of them are small apertures, usually in the posterior or posterolateral portion of the diaphragm.

Our patient was born at 8:30 P. M., February 25, 1952. The infant was dyspneic and cyanotic at birth. A chest X-ray was made soon afterward, which revealed that the left chest was filled with intestines (Figs. 1 & 2). The child had been in

oxygen since birth, and this was continued for the 75-mile trip to this hospital. On arrival the child was cyanotic and dyspneic while receiving 100% oxygen. He was in an excellent state of nutrition and hydration, and it was felt that any delay would decrease his chances of survival. Consequently, surgery was begun within one-half hour after his admission to the hospital, which was 17 hours after birth.

We did not use an intratracheal tube but had one available if needed. A posterolateral incision was made between the 8th and 9th ribs on the left, and all mobile abdominal viscera were found to be in the chest. The stomach, small intestines, and transverse colon were found in a peritoneal sac, which reached to the apex of the pleural cavity. This sac was opened and the contents easily pushed down into the abdominal cavity. The intestines and stomach contained little or no air at this time. The remnant of diaphragm consisted of a membrane composed of pleura and peritoneum, which was folded against the heart. It contained a few barely discernible muscular fibers in its medial portion. It was unattached laterally, anteriorly, and posteriorly. When stretched out, it reached only about two-thirds of the way to the lateral chest wall. Parts of the 9th and 10th ribs were resected, and the chest wall muscle was pushed in so that this membrane could be sutured to it even though it was under some tension. The left lung easily expanded under positive pressure, and a small catheter was placed leading from the chest for suction. The child progressed slowly after operation.

The patient was discharged from the hospital about three weeks postoperatively. He was moderately dyspneic and the left diaphragm was high, but he was eating well and it was hoped that he would gradually improve. He was readmitted on two occasions because of pneumonia with dyspnea and cyanosis and had to be put into oxygen. He failed to gain weight, and eating made him breathless.

He was admitted the fourth time on May 14, 1952. He stayed in oxygen continuously and was cyanotic even there. He gradually became worse, and it was



obvious that he would not survive unless something more could be done. The X-ray (Fig. 3) showed that his left diaphragm had risen above the level of the clavicle, and it appeared that no opening had occurred in the diaphragm but, instead, it had sim-

torily, so a short upper midline abdominal incision was made and all mobile viscera displaced to the outside. Then the diaphragmatic membrane was folded over three times and sutured to itself and the chest wall. This made a thicker and tougher mem-



Fig. 1.—P-A view of the chest twelve hours after birth showing the small intestine shadows high in the chest.

ply stretched. We operated on him again through the same incision. The diaphragm was stretched all the way to the top of the chest cavity but was intact. The stomach and intestines could not be pushed down enough to imbricate the diaphragm satisfac-



Fig. 2.—Lateral view of the chest twelve hours after birth showing the small intestine shadows high in the chest.



Fig. 3.—P-A view of the chest before the second operation. The left diaphragm has stretched to the height of the clavicle, and the mediastinum is almost completely to the right of the vertebra.

brane and one which we hoped would not stretch so much again. Muscle fibers were still almost non-existent, and no movement in the diaphragm was ever discernible. The abdominal incision was closed without very much difficulty after the chest wall was closed.

From the moment the left lung was expanded and the chest closed with a suction catheter in place, the infant was pink and breathing easily. He progressed rapidly, and within three days after operation he was eating well without dyspnea for the first time since birth. He left the hospital three weeks after operation. Since that time he has rapidly gained weight and vigor, and when last seen on the 5th of August 1953, he seemed like a normal child. The left diaphragm stays high at the fifth rib posteriorly but is stable. The heart has still remained partially on the right (Fig. 4).

Almost all articles on this subject emphasize the necessity of the abdominal approach<sup>1,2,3,4,6,7, etc.</sup>, but I believe this situation could not have been dealt with adequately except through the chest. At the



second operation, the intestines were distended with air so that it was necessary to pull them out of an abdominal incision, but both incisions were important.

The embryology and anatomy of the diaphragm have been thoroughly discussed by Harrington<sup>4</sup> and



Fig. 4.—P-A view of the chest six months after the second operation, showing the left diaphragm at the level of the 5th rib posteriorly. Both lungs are aerating well.

many others. The absence of the posterior portion of the left diaphragm with no posterior attachment has been reported fairly often<sup>6</sup>, etc., but we have found no reports where the child lived when the diaphragm was not attached posteriorly, laterally, or anteriorly.

The possibility of saving a considerable number of newborn lives by suspecting this condition in every cyanotic or dyspneic infant and undertaking immediate surgery if it is found should again be stressed.

#### SUMMARY

1. The case of a patient who had a congenital

diaphragmatic hernia repaired at the age of 17½ hours and who is now well is presented.

2. This child is younger than any case found reported in the literature who has survived.
3. The extent of non-attachment and under-development of the diaphragm was exceedingly extensive.
4. A second operation was necessary because of extreme stretching of the diaphragm, which resembled a primary eventration.
5. It is emphasized that all newborns with persistent dyspnea and cyanosis should be X-rayed early. If a diaphragmatic hernia is found, the earlier the operation is performed the better. It should be feasible in many instances to operate before the infant is more than 5 or 10 hours old.

#### BIBLIOGRAPHY

1. Ladd, W. E., and Gross, R. E.: *Abdominal Surgery of Infancy and Childhood*, W. B. Saunders Co., Philadelphia, Chap. 27, 333-348, 1941.
2. Donovan, E. J.: Congenital Diaphragmatic Hernia, *Ann. Surg.*, **122**: 569-581, 1945.
3. Baumgartner, C. J., and Scott, R. F.: Congenital Diaphragmatic Hernia—A Surgical Emergency in Infancy, *Arch. Surg.*, **61**: 170-182, (July) 1950.
4. Harrington, S. W.: Surgical Treatment of the More Common Types of Diaphragmatic Hernia, *Ann. Surg.*, **122**: 546-568, 1945.
5. Hedblom, C. A.: Diaphragmatic Hernia: Study of 378 Cases in Which Operation Was Performed, *J.A.M.A.*, **85**: 947-950, (Sept. 26) 1925.
6. Wyatt, O. S.: Congenital Diaphragmatic Hernia, *J. Lancet*, **6**: 164-167.
7. Hartzell, J. B.: Diaphragmatic Hernia in Children—Resume of 68 Cases Occurring in Children Under 10 yrs. of Age Treated by Operation, *Am. J. Surg.*, **48**: 582-598, 1940.
8. Tolins, Stephen H.: Congenital Diaphragmatic Hernia in the Newborn, *Ann. Surg.*, **137**: 276-280, (Feb.) 1953.

*Lewis-Gale Hospital.*

## NEAR FATAL ANAPHYLACTIC SHOCK ASSOCIATED WITH THE ADMINISTRATION OF PENICILLIN\*

CLIFFORD G. GADDY, M.D.,  
Danville, Virginia

Sensitivity reactions to penicillin are becoming more common. However, in spite of its very extensive use, only recently have there been reports of several fatal or near fatal reactions.<sup>1-10</sup> The following case report of near fatal anaphylactic shock associated with the administration of penicillin is presented to further warn against the promiscuous use of penicillin and other antibiotics. The case illustrates the importance of being prepared to treat such emergencies.

### CASE REPORT

This 37 year old white female was referred by her physician to a urologist because of suprapubic pain, not associated with dysuria or pyuria. She gave a history of having been treated for urethral stricture and cystitis some three or four years previously. Cystoscopic examination was performed, which revealed a trigonitis. The urine showed 6-8 WBC per high power field. Because it was known that the patient had demonstrated other allergies, inquiry was made regarding previous penicillin sensitivity. She had received penicillin on numerous occasions, the most recent being about five months previously, and had never manifested any reaction. Three or four minutes following the administration of 300,000 units of aqueous procaine penicillin (Schenley), the patient complained of being flushed in the face and an instant later collapsed on the floor. She immediately had a tonic and clonic convulsion with urinary incontinence and became very cyanotic. Her respiratory efforts resulted in only slight gurgling in the upper bronchial tree and frothing at the mouth. No breath sounds were present, and the pulse, blood pressure and heart sounds were unobtainable. She was given 2 cc. of aqueous adrenalin intramuscularly and aminophylline 0.5 gr. diluted to 10 cc. was administered intravenously. Oxygen was administered with an Emerson Resuscitator. Thirty minutes after she collapsed, breath sounds were audible, though many rales were present. The heart sounds were audible, but of poor quality, and the radial pulse and blood

pressure were yet unobtainable. She was given 40 units of adrenocorticotrophic hormone in an aqueous solution intramuscularly and 40 units of the hormone in a gelatin suspension intramuscularly. Fifty minutes after the onset of the episode the lungs were free of rales and the heart sounds were improved. The blood pressure was still unobtainable and an infusion of 5% glucose in saline was started. At this time she was aware of her surroundings and complained of abdominal pain. Two hours after the administration of the penicillin her blood pressure was 80/50 and she was transferred to Memorial Hospital where her infusion was continued and she was placed in an oxygen tent for the subsequent three hours. For the remainder of her forty-two hours in the hospital she was asymptomatic except for the occurrence of transient edema of the right great toe and dorsum of the foot.

Past history revealed that for several years she had had symptoms of hay fever, and for the past four years has had desensitization injections during the spring. For three months prior to the penicillin reaction she had been getting weekly injections of a vaccine containing dust, wool and pollens. With her last injection, two weeks prior to the penicillin reaction, she had developed an urticarial reaction which had been treated with adrenalin and an anti-histamine. She had shown a negative skin reaction to penicillium with intra-dermal tests done three years previously. During the past four years she had received a number of injections of penicillin for the treatment of colds, for an injury to her hand, and for a urinary tract infection. Two years previously she received tetanus antitoxin without reaction. On a few occasions, not related to injections, she has had slight wheezing in her chest but no frank asthma.

### COMMENT

The successful management of anaphylactic shock demands immediate and vigorous treatment. In such severe reactions it is probably preferable to administer epinephrine intravenously in doses of 0.25 to 0.3 of 1:1000 solution and repeat as indicated. Aminophylline 0.5 should be administered intravenously. These measures aid in the relief of the

\*From the Department of Internal Medicine, Bowman Gray School of Medicine, Winston Salem, N. C., and the Memorial Hospital, Danville, Virginia.

acute pulmonary edema. Oxygen should be available for administration by mask. As the pulmonary edema subsides, shock is treated by the administration of intravenous fluids, or, if necessary, plasma. ACTH or cortisone may protect against recurrences of anaphylaxis or other delayed sensitivity reactions.

This case illustrates that the history of absence of reaction to previous injections of penicillin does not assure against serious reaction. Likewise, a negative skin test to Penicillium does not assure against anaphylaxis when subsequent injections of penicillin have to be given. With the extensive use of penicillin and its repeated administration, more serious reactions may be anticipated, and all persons who administer it should be prepared to treat such emergencies which may be occasioned by its use.

#### BIBLIOGRAPHY

1. Feinberg, Samuel M., Feinberg, Alan R., and Moran, Clifford F.: Penicillin Anaphylaxis, Nonfatal and Fatal Reactions, *J.A.M.A.* **152**:114 (May 9) 1953.
2. Burleson, R. J.: Anaphylactic Shock Due to Penicillin, *J.A.M.A.* **142**:562 (Feb. 25) 1950.
3. Wilson, R. K.: Anaphylactic Reaction from Penicillin—Report of Case, *J.M.A. Alabama* **21**:291 (April) 1952.
4. Farber, J. E., and Ross, J.: Antibiotic Anaphylaxis, *M. Times* (Jan.) 1952.
5. Everett, R.: Anaphylactic Reactions from Local Use of Penicillin: Report of Two Cases, *J.A.M.A.* **146**:1314 (Aug. 4) 1951.
6. Leibowitz, H., and Schwartz, E.: An Unusual Reaction to Penicillin: A Case Report, *Ann. Allergy* **8**:668 (Sept.-Oct.) 1950.
7. Waldbott, G. L.: Anaphylactic Death from Penicillin, *J.A.M.A.* **139**:526 (Feb. 19) 1949.
8. Thomson, W. O.: Sudden Death Following an Injection of Penicillin, *Brit. M.J.* **2**:70 (July 12) 1952.
9. Higgins, G. A., and Rothchild, T. P. E.: Fatal Anaphylactic Shock from Procaine Penicillin, *New England J. Med.* **247**:644 (Oct. 23) 1952.
10. Mayer, Peter S., Mosko, Milton M., Schutz, Paul J., Osterman, Floyd A., Steen, Lowell H., and Baker, Lyle A.: Penicillin Anaphylaxis, *J.A.M.A.* **151**:351 (Jan. 31) 1953.

753 Main Street.

#### New Books.

Below are listed some of the newer books received at the Tompkins-McCaw Library of the Medical College of Virginia, Richmond. Most of these may be borrowed under usual library rules.

Army Medical Service Graduate School—Symposium on stress. 1953.  
 Bailey—Intracranial tumors. 2d ed., 1948.  
 Bodian, ed.—Fibrocystic disease of the pancreas. 1952.  
 Clark—Preventive medicine in medical schools. 1953.  
 Clinical orthopaedics. #2, 1953.

Glasser—Physical foundations of radiology. 2d ed., 1952.  
 Gray—The bile pigments. 1953.  
 Hartough—Thiophene and its derivatives. 1952.  
 Hofman—Imidazole and its derivatives. Pt. 1. 1953.  
 Luck—Bone and joint diseases. 1950.  
 Overholser—The psychiatrist and the law. 1953.  
 Schaufler—Pediatric gynecology. 3d ed., 1953.  
 Simpson—Condensed pyridazine and pyrazine rings. 1953.  
 Tasaki—Nervous transmission. 1953.  
 Tower—Differential diagnosis of common diseases of the eyeground. 1953.  
 Training and research in state mental health programs, 1953.



## DERMATORRHEXIS: A CASE REPORT (THE SO-CALLED EHLERS-DANLOS SYNDROME)

BERNARD D. PACKER, M.D.,  
and

JAMES F. BLADES, M.D.,  
Richmond, Virginia

In 1934, Tobias, in this country was the first to call attention to an unusual mesenchymal disturbance manifested by fragility and splitting of the skin, hypermobility of joints, and pigmented subcutaneous nodules of traumatic origin. Less frequently, this condition is associated with a peculiar hyperelasticity of the skin which earlier gave the syndrome the name of cutis elastica or India rubber skin. Although many reports have since been published in dermatological and pediatric journals firmly establishing the place of this disease entity, it still remains but little known in surgical circles.

This condition was described in the European literature by Kopp as early as 1888, but it remained for Ehlers who reported a case in a paper presented to the Danish Dermatological Society in 1899, and Danlos of France who reported his case in 1908 to clarify the symptomatology and to establish the syndrome as a new clinical entity. In 1936, Ronchese, in this country, correctly focused our attention on the prime importance of the fragility and splitting of the skin with its tendency to delayed healing and repeated wound disruptions as a clinical problem. He gathered a series of 24 cases and added 3 of his own. There obviously are many individuals that show hyperflexibility of joints with degrees of thinning and hyperelasticity of the skin and a tendency to bruise easily, which condition was classified as "formes frustres" by Tobias. However, only those cases that present the picture of repeated wound disruption and delayed healing become a surgical problem.

### CASE HISTORY

At the age of 14 years, the patient, a white girl, accidentally struck the medial malleolar area of the right ankle with an axe while chopping wood. A small chip of bone was shaved from the tibia at the time of the accident. The wound was sutured after proper surgical cleansing. The scar remained closed for a short period of time, then underwent a repeated process of swelling, with burning sensation in the scar and, finally, spontaneous disruption of the wound without evidence of purulent infection.

Three years after this injury and after many repetitions of the above, the patient was readmitted to the hospital for surgical excision of the scar which had repeatedly failed to remain healed. After two surgical procedures in which the scar tissue was excised, the wound again continued to disrupt and showed an adherent scar draining a serous exudate.

Five years after the original injury, the patient was again readmitted to the hospital with the complaint that the wound failed to remain closed. The examination at this time showed no acute inflammation. There was local edema of the foot distal to the scar. The edges of the scar showed chronic cicatrix with adherence of the scar to bone. There was no sinus tract and the x-rays showed the underlying bone to be essentially normal. Surgery was again performed, consisting of a wide excision of the scar tissue and resection of the surface of the bone, then shifting of the periosteum over the raw bone edges and the sliding of a large skin flap over the original scar area. It was noted during convalescence that the wound edges were slow to adhere to each other and the intervening clot that formed was rather soft. The skin edges always remained viable. On removing the sutures 14 days after surgery, the wound edges gaped apart and tape was required to replace each suture as it was removed.

After a slow convalescence, the wound healed. Several months later the episodes of local swelling, itching and burning of the scar was noted and, again, the wound spontaneously disrupted from end to end but showed no inflammatory changes. This time the wound was closed with tape and skin clips. It again healed over with a crust formation and eventually became dry. Every few months thereafter, the same episodes of itching, swelling and disruption of the wound would recur.

Several other noticeable symptoms developed which led one to believe that the condition was not purely a local one. Purpuric spots would develop over both lower extremities, some as large as a silver dollar. It appeared that these episodes of purpura would occur about the time of the wound disruption.



Extensive hematological tests were normal except for only a slight reduction of platelets which on one occasion was 90,000/mm.; but following a transfusion, the count rose to 182,000. Eventually, the platelet count was normal. Clot retraction test showed at one time: 1 hour very poor retractility, 24 hours partial retractility. Bleeding time was always normal. Three days later, after a transfusion, the clot retraction was partial after 1 hour. The rest of the blood studies were normal and the urinalysis was normal.

The blood transfusion seemed to hasten the healing of the ankle wound. Eventually the scar at the ankle became stabilized without keloid or cicatrix and has now remained normally healed for several years.

The patient was later readmitted to the hospital at three different times, 5/30/50, 6/6/50, 7/30/50, for spontaneous mediastinal and subcutaneous emphysema which was serious enough to require oxygen for respiratory distress. The emphysema extended down the right arm to the elbow, over the anterior chest up the neck, face and scalp. At about this time, an old scar in the mid part of the upper arm sustained years before when a fish hook was caught in the skin of the arm spontaneously disrupted. This wound was allowed to heal by simple adhesive tape dressings. The patient continued to have attacks of spontaneous mediastinal emphysema for as many as 12 times before this condition eventually healed. The lung fields were normal on x-ray examination except during the periods of mediastinal emphysema.

On November 12, 1950, the patient, at the age of 19 years, was operated on for an acute surgical abdomen. A right lower rectus incision was used. After removing the appendix, the operative wound was closed with catgut for the deeper layers and cotton for the skin. The wound healed per primam.

On January 25, 1951; June 15, 1951; November 18, 1951, and again on April 27, 1953, the superficial portion of the appendectomy wound separated throughout approximately three-fourths of its length. The line of separation was perfectly straight and the wound margins sharp as though cut with a razor. No tissue reaction was present, nor did any develop in the process of healing. A biopsy of the wound margin made November 18, 1951, showed "keratinization of the squamous epithelial layer with no evidence of collagen formation." The wound again

required suturing for the recent disruption on April 27, 1953.

On April 24, 1953, the patient was examined because of a recurrence of purpura on the extremities. A small slowly healing laceration of the right index finger was treated by dressings. At this time the following laboratory studies were made by Dr. Henry G. Kupfer of the Clinicopathological Laboratories of the Medical College of Virginia. Three days later the appendectomy scar disrupted for the fourth time in two and one-half years.

HEMATOLOGICAL STUDY OF THE PATIENT

Test	Normal Values	Results
RBC	4.2-5.8 mill/cu. mm. 400,000-	4,920,000
Platelet Count	600,000 cu. mm.	39/1000 291,880
Bleeding Time	1-3 min. (Duke)	5 min.
Clotting Time	5-10 min. (L & W)	8 min.
Clot Retraction	60 min.	good 1 hr.
Total Protein		6.8 gms. per 100 cc.
Albumin		4.9 gms. per 100 cc.
Globulin		1.9 gms. per 100 cc.
Fibrinogen	200-600 mg%	230 mg. %

A similar manifestation of this tissue instability occurred March 20, 1952, following two hypodermic injections over the deltoid region of the upper right arm. A marked inflammatory reaction developed eventuating in a slough in the skin at the site of each injection, measuring about 2½ and 3 cm. respectively. Healing failed to occur; and approximately one month later, the areas were grafted, using the Davis Pinch graft. The grafts took well and two weeks after grafting, the areas were healed.

Two and a half months later, the central two-thirds of each scar became necrotic and sloughed. This was associated with pain, numbness and a burning feeling in the arm. Four or five weeks were required for spontaneous healing.

Seven months later, a similar episode of spontaneous skin necrosis occurred in the old scars, followed by slow, gradual healing, leaving medallion shaped large scars at the site of each hypodermic injection.

#### DISCUSSION

Dermatorrhesis may appropriately be considered the reverse of scleroderma. This condition is sometimes hereditary but usually is recorded as an isolated case. The anomaly becomes apparent in infancy or childhood and persists throughout life.

Ronchese conceived the disease to be based upon an abnormality of the mesenchymal tissues. Other defects may be associated with this condition, such as mental retardation, congenital defects, tetralogy of Fallot; and, as in this case, repeated attacks of mediastinal and subcutaneous emphysema from repeated spontaneous rupture of alveolar blebs. M. L. Samuels, *et al.*, reported a case with prolonged post partum bleeding. The purpuric spots in his case were similarly described.

The initial onset of symptoms is usually associated with trauma. The many minor bruises sustained in childhood may manifest themselves as poorly healing scars over the exposed areas, such as the shin, knees, elbows, forehead, etc. A slight bruise may cause the skin to burst or split, showing a clean sharp bordered laceration described as a fish mouth laceration. These wounds do not heal well when sutured but do better when the edges are pulled together by adhesive tape or even just dressed and allowed to slowly granulate. The wound will eventually heal but may continue to show cycles of swelling of the scar, bullae formation and pseudo-keloid formation followed by spontaneous disruption of the wound from end to end. The scar characteristically disrupts *in toto*. In this case, ecchymotic areas would periodically develop over the extremities, some as large as a silver dollar, others more petechial in size, which would presage old wound disruptions or new episodes of mediastinal emphysema. The scar would itch, swelling of the surrounding tissues would develop, the scar would become elevated, reddened and bleb formation would be noted—all forewarning disruption of the scar. The Rumpel-Leede test may, as in this case, be positive periodically. The disruption of the scar is associated with brisk hemorrhage which subsides to a sanguineous ooze. The wound slowly granulates and an eschar forms. Eventually, healing becomes complete with a widened scar. The defective tissue appears to be in the corium layer while epithelialization apparently proceeds normally. This is borne out by the fact that superficial pinch graft donor sites heal satisfactorily, and deep intra-muscular injections of drugs, such as penicillin, produce no hematoma or disturbance in muscle tissue. Subcutaneous injections where the medication or drug lies in the corium layer of the skin as in this case produces poorly healing wounds.

The elastic skin feature is less often seen, but, when present, the general character of the skin is

smooth, soft, and apparently somewhat thinned. In certain cases, the skin is extraordinarily supple and elastic and, when a fold is drawn out from the body and released, it may return to its original position with an audible snap like that of a rubber band. The laxity is especially marked about the large joints. It may be general or confined to certain regions. A velvety texture is notable, and the skin glides easily over the underlying tissues, the fat layer being often atrophic. This patient showed typical relaxation of joints, a condition commonly called "double jointedness" but not the *cutis elastica* feature.

The blood chemistry tests give usually normal results. The only positive findings in this case were an inconstant delayed clot retractility time and on one occasion a slight diminution of the platelets. The purpuric areas developed rather spontaneously and subsided similarly, although the development of the purpuric spots was also associated with redness and edema of the most recent scars, but not the old scars. Recent examinations again showed a crop of purpuric spots on the extremities associated with the recent sloughing of the old skin grafted wound on the right arm on February 15, 1953, and a new crop presaging the disruption of the appendectomy scar on April 27, 1953.

Histologic study of the tissues does not give constant findings; however, certain observers reported a defect in the structure of the collagen fibers. Some observed the collagen fibrils as being elongated and wavy and probably intrinsically defective. Apparently the elastic fibers are not abnormal. Samuels reports an atrophy of the epidermis with blunting of the rete pegs and the increase and fragmentation of elastic tissue. When pseudo-tumors are present, giant cells of the foreign body type are numerous beneath the atrophic epidermis.

#### CONCLUSION

A case of Ehlers-Danlos syndrome is reported in which attention is called to the surgical problem of delayed skin wound healing and repeated wound disruption.

#### BIBLIOGRAPHY

Tobias, N.: Danlos Syndrome Associated with Congenital Lipomatosis. *Arch. Dermatology and Syph.*, **30**: 540-551, Oct., 1934.

Ronchese, F.: Dermatorrhesis, with Dermatochalasis and Arthrochalasis (Ehlers-Danlos Syndrome). *Am. J. Dis. Children*, **51**: 1403-1414, June, 1936.

Ringrose, E. J., Nowlan, F. B., and Perry, H.: Ehlers-Danlos Syndrome. *Arch. Dermatology and Syph.*, **62**: 443-448, Sept., 1950.

Freeman, J. T.: Ehlers-Danlos Syndrome. *Am. J. Dis. Children*, **79**: 1049-1056, June, 1950.

Wallach, E. A., and Burkhart, E. F.: Ehlers-Danlos Syndrome Assoc. with Tetralogy of Fallot. *Arch. Dermatology and Syph.*, **61**: 750-752, May, 1950.

Pray, L. G.: Cutis Elastica (Dermatorrhesis) Ehlers-Danlos Syndrome. *Am. J. Dis. Children*, **75**: 702-711, May, 1948.

Nicod, M.: Ehlers-Danlos Syndrome. *Ann. Pediatrics*, **167**: 358-360, 1946.

Johnston, Sam, and Falls, H. F.: Ehlers-Danlos Syndrome—Clinical and Genetic Study. *Arch Dermatology and Syph.* **60**: 82-105, July, 1949.

Sutton, Richard L., and Sutton, Richard L., Jr.: *Diseases of the Skin*, Ed. 10, 640-642, St. Louis, 1936, C. V. Mosby Co.

Samuels, M. L., Schwartz, Melvin L., and Meister, M. M.: The Ehlers-Danlos Syndrome, *U. S. Armed Forces Medical Journal*. **4**: 737-742, May, 1953.

### Miami Society Conducts Plaque Poll.

Universal display of the AMA plaque, "To All My Patients," in doctors' offices was recommended by the majority of the Miami, Fla., physicians responding to a recent informal poll conducted by the Dade County Medical Association. Many favorable comments on the plaque were received from physicians whereas only one doctor gave a definitely unfavorable response. Typical patient comments noted by these physicians ranged from "a good idea" to "glad to see we have a humanitarian amongst the profession." Only one doctor reported a negative patient response which implied that medicine is "becoming too commercialized."

This poll brings out the fact that most patient fee questions concern the cost of doctors' services, the cost of hospital services, making arrangements to pay doctor bills and insurance. From the doctor's point of view, the discussion of fees was indicated to be "easy" by 42 per cent of the group, "relatively easy" by 35 per cent, "fairly difficult" by 15 per cent and "difficult" by only 8 per cent. The questionnaires were distributed to 112 physicians—rep-

resenting a cross section of the medical society membership—about a month after some 1,000 plaques had been distributed free by the local society.

To help practicing physicians create better relations with their patients, the American Medical Association is continuing to offer this plaque for one dollar, postpaid. Direct your requests for the plaque to the Order Department, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

### School Health Film Now Available.

How a typical town in Oklahoma recognized its school health problems and, through community effort, launched a plan to solve them is the subject of a new film which has been added to the AMA motion picture library. "School Health in Action"—a sound and color film—was produced for the Oklahoma State Department of Health with the cooperation of the Oklahoma State Medical Association. The service charge for this film is two dollars. Requests should be made to the AMA's Committee on Medical Motion Pictures.



## NOTES ON TUBERCULOSIS\*

## Symptoms

Years ago one of the savants in our profession declared: "You cannot diagnose a disease unless you think of it."

This is not merely a trite aphorism applicable to a bygone era but a succinct statement expressing a conclusion based upon commonplace observations and experiences that recur even to this day.

There are times when only to think of a disease is to solve almost instantly a knotty diagnostic problem that has weighed heavily upon the attending physician for days or weeks.

In the past, even more so than at present, a large number of cases of tuberculosis have been found to have had far advanced disease by the time they were diagnosed. True, many became spreaders of infection months before they became ill, or ill enough to consult a physician. On the other hand, many had consulted their physician months or years before their symptoms became sufficiently intense or spectacular to *compel* consideration of tuberculosis as a possible cause; the disease was finally diagnosed—as soon as it was thought of.

Great strides have been made in case-finding in the field of pulmonary tuberculosis since the advent of mass x-ray screening of the lungs of apparently healthy persons. But, until such time as everyone has been processed at least once, to say nothing of periodically, in this manner, patients with pulmonary tuberculosis will continue to present themselves to their family physicians for relief of symptoms caused by the disease. Not all of the cases will have advanced tuberculosis when the doctor is first consulted. Most of them will have greater involvement than the majority discovered with active lesions following community survey.

Symptoms which should invariably alert the family physician to the possible presence of tuberculosis are:

1. Persisting ease of fatigue, not easily accounted for and/or promptly relieved by the patient or his physician.
2. Unexplained loss of ten pounds or more in weight.
3. Unexplained loss of appetite.
4. Persistent unexplained chest pains (particularly sharp PLEURISY pain). Pleurisy with effusion should always be considered tuberculous until proven otherwise. Chest x-rays should be taken at once following absorption or withdrawal of the fluid and periodically thereafter, for at least a year, regardless as to how well the patient appears to be. (Needless to say, should malignancy be suspected, every effort will be made to exclude tuberculosis as soon as possible).
5. Hemorrhage from the lungs; if the blood seems to come from the lungs, it does come from the lungs for all practical purposes, and is due to tuberculosis until proven otherwise. Until recent years pulmonary hemorrhage was so often found to be tuberculous in origin that such a symptom was almost tantamount to diagnosis. At least fifty percent of pulmonary hemorrhages are today known to be caused by diseases or conditions other than tuberculosis; however, the adage stills holds.
6. Unexplained cough of a month or more duration (don't permit your patient to be so unrealistic as to attempt to attribute a two months' cough to a fifteen years' smoking habit—as has been done).
7. Expectoration; is not necessarily associated with cough—it may be accomplished simply by "clearing the throat." Sputum may be of *any* character, as measured by color, consistency or volume.
8. Fever. While this may occur early in tuberculosis it is seldom, unless acute, observed as a presenting symptom; most likely you will have been consulted for relief of one or more of the other symptoms listed, where the patient proves to be mildly febrile. The patient should be instructed to take his temperature four times daily to confirm or exclude the presence of low grade fever.
9. Cold night sweats (are usually not the first symptom to appear).
10. Unexplained and persistent nervousness or indigestion.
11. Recurring colds.

\*Prepared by the Virginia State Health Department.



12. Failure to recover rapidly and completely from *any* acute illness or serious accident (including pregnancy).
13. Abrupt or intermittent hoarseness, particularly when unassociated with acute upper respiratory infection.
14. Peri-rectal abscess.

Even where a given symptom is recognized in and of itself to be characteristic of tuberculosis, the age-old practice of discounting the presence of one symptom because of the absence of another has been responsible for many tragic delays in diagnosis. For example, patients have been known to ignore a chronic cough and/or expectoration for months because they did not *also* tire easily or *lose* weight (and vice versa).

Actually, *any* of the symptoms enumerated may be the first to appear and for a variable and sometimes very long period may persist as the sole or chief symptom. As time goes on the still unsuspected or unrecognized progressive case develops additional symptoms which also may occur in any order or conceivable combination. No matter what single symptom or set of symptoms might be chosen from the list, arranged in any order of sequence or intensity, there would be created the exact clinical picture of someone somewhere suffering from pulmonary tuberculosis.

No particular symptom or set of symptoms means any more necessarily than any other with reference to the total amount of lung involved or the patient's ultimate prospect for recovery. Each group may simply represent a different manifestation of the same stage of the disease, in different individuals. Why one person has a hemorrhage instead of cough, while another has pain instead of loss of weight, with

approximately corresponding involvement of the lungs, no one knows any more than why, as a result of the same sudden loud noise, one person jumps, another screams and still another faints.

It is of course unnecessary to remind that most if not all of the symptoms listed can be caused by conditions or diseases other than tuberculosis but the presence of one or more which cannot be promptly explained and relieved should suggest a thorough examination of the lungs (including x-ray).

In the aging, evaluation of symptoms, and ultimate diagnosis, can be as difficult as they are important. In the later decades of life the prevalence of chronic debilitating conditions simulating tuberculosis on x-ray and otherwise, is well known.

Sometimes elderly persons take varying degrees of systemic rest solely as a concession to infirmities accepted and attributed to "advancing years". In so doing they may alter their life pattern sufficiently to forestall rapid spread of an underlying tuberculous lesion; because of the purely coincidental and therefore usually only partially adequate treatment, the disease smoulders on, gradually progressing, unsuspected for months or years, until, at long last, the sputum is examined, or the patient dies, or a favorite grandchild, contracts tuberculous meningitis.

Tuberculosis has been increasingly recognized in recent years as a disease responsible for many deaths in the later decades of life. Too often in elderly persons the presence of tuberculosis can be proven *only* by recovery of the Tubercle Bacillus from the sputum or gastric washings.

The best way to protect children and *grandchildren* from tuberculosis is to examine parents and *grandparents*.

---

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### Psychiatric Social Work\*

Psychiatric social work<sup>1</sup> is social work undertaken in direct and responsible relation with psychiatry. It is practiced in hospitals, clinics, or other psychiatric auspice as a part of a clinical team including psychiatrists, psychologists and in many instances psychiatric nurse, occupational therapists, and other professional personnel concerned with the treatment of patients and the extension of psychiatric services. Its aim is to contribute to those services and activities within the community which promote mental health and are conducive to the restoration of the health of individuals who are suffering from mental and emotional disturbances.

The primary area of practice of the psychiatric social worker has been social casework applied in diagnosis and treatment of persons with personal and social maladjustment caused or aggravated by mental and emotional problems. One of the differentiating factors in the functioning of the psychiatric social worker is the fact that the casework service must be coordinated with the contribution of the other members of the clinical team in which the psychiatrist has the ultimate responsibility for leadership and direction. Casework in the psychiatric setting carries specific emphases that derive from this collaborative effort. Specific skills and knowledge which the psychiatric social worker acquires through training and experience include: an understanding of the behavior of persons who are mentally or emotionally ill and the reaction of family members to severe emotional illness, a knowledge of the social and environmental circumstances that may contribute to this illness or may affect the adjustment and the care of the patient, skill in utilization of community resources to the end that the available service most likely to be of help to a particular patient and his family may be wisely selected and productively used; and ability to differentiate and to integrate this professional service in a collaborative relationship with the other disciplines functioning within the psychiatric team.

\*Article prepared by Jane M. Hashagen, Chief Psychiatric Social Worker, Children's Service Center of Charlottesville and Albemarle County, Inc., Charlottesville, Virginia.

A fully qualified psychiatric social worker is one who has had either specialized education in class and field as a part of his social work training plus a period of practice in a psychiatric setting, or has completed his social work training plus a longer period of supervised psychiatric social work practice.

The field of practice includes social work with individuals and groups, supervision, teaching, administration, consultation, participation in education of related professions such as medicine and nursing, research and collaboration in the development of mental health programs and community education.

### PSYCHIATRIC SOCIAL WORK PRACTICE

The primary settings in which psychiatric social workers are engaged in direct services to patients are psychiatric hospitals and clinics under governmental, federal, state, local or community sponsorship. Modern psychiatry sees the mentally or emotionally ill patient as a human being intricately related to his social environment, particularly his family. He is a total person with many needs and many strengths and is not to be regarded as an isolated specimen of pathology. Treatment of the sick individual is accomplished through the team approach with each professional discipline adding their special skills in order to meet his needs. The social worker plays a particularly important part in this plan of treatment by providing a link between the patient and his family . . . and his community . . . and between the hospital and clinic and the community of which it is a part. The social worker also works directly with the patient in helping him mobilize his personal resources in his efforts toward recovery.

In psychiatric hospitals, the social worker assumes responsibilities with both the patient and his family which shift throughout treatment and after care. At the time of admission the social worker helps the patient understand the facilities for treatment that are available and assists him in his use of them. The family is helped to understand the meaning of the patient's illness and to alleviate stress that may

be related to his hospitalization. The social worker provides the other members of the therapeutic team with social, economic and environmental information which is important for diagnosis and treatment. Throughout the period of the patient's hospitalization the social worker seeks to maintain a continuity of responsibility for the patient with both the family and the community. At the time of the patient's discharge the social worker helps the family to make the readjustments necessary for the patient's return home. The social worker also assists the patient in his planning for discharge and return to the community. If it is impossible for the patient to return to his home, care in a foster home may be arranged. In many hospitals, the social worker is the key person in this care program. He mobilizes both individual and community resources to assist the patient in his rehabilitation and maintains a continued contact with the patient after his return to the community.

Traditionally, psychiatric clinics have had social workers as staff members. The size and team relationships with clinic staffs have led to a close interdisciplinary cooperation and wide use of social services. The social worker may collaborate in the treatment of the patient or he may be given the direct responsibility for treatment. As in the psychiatric hospital, the social worker in the clinic provides the continuity for the patient and his family and maintains liaison between the clinic and the community. Specific contributions which the psychiatric social worker makes to the clinic include: establishing the suitability of the agency's service for meeting the applicant's need, assisting the patient in his use of the available services, helping him with his feeling about his problems and making necessary referrals to other community resources, contributing knowledge of the patient and his history toward development of a working diagnosis and treatment plans, rendering direct service to the patient

and others in his environment as indicated by the treatment program, facilitating use of his own assets to strengthen his efforts for a more satisfactory adjustment. The social worker in the clinic is also active in the interpretation of the clinic's program and in the preventive work of community education for mental health.

Psychiatric social work practice encompasses more than the functions directly related to patient care and treatment outlined above. The psychiatric social worker in a clinic or hospital may have responsibility as a supervisor or administrator for other social workers. In many clinics he may carry administrative responsibility for the total clinic. He may be engaged in teaching other disciplines or in individual or multi-discipline research. On federal, state or local levels the psychiatric social worker may represent the clinical team as a consultant to other staff members or to related community health and welfare services. He may also actively work in the education of the community in mental health concepts and promotional services for community mental health programs.

A grant from the National Institute of Mental Health enabled the American Association of Psychiatric Social Workers to make a study of practice in psychiatric hospitals and clinics in 1950. (The report of this study is to be published during 1953.) The findings of this study give a detailed picture of the activities of the social worker in psychiatric hospitals and clinics and suggests areas for future research and development.

#### BIBLIOGRAPHY

- (1) For current information regarding development in the psychiatric social work field the reader is referred to American Association of Psychiatric Social Workers, 1860 Broadway, New York 23, N. Y.
- (2) Prepared for Social Work Yearbook, 1953, by A.A.P.S.W.



## MEDICO-LEGAL NOTES

### The Doctrine of Aggravation Under the Virginia Workmen's Compensation Law

The doctrine of aggravation has been accepted by either specific legislative enactment or by judicial interpretation in most states, including Virginia, for some years.

Briefly, this doctrine says that a workman who has a pre-existing disease, or disability due to injury, non-industrial in origin, may materially aggravate this disease or disability, whether latent or manifest, by an accident or illness causally related to the employment, so as to cause the ensuing jointly produced disability or death to become compensable.

The presence of a pre-existing non-industrial ailment which renders the workman more susceptible to a second illness or injury, or the fact that second illness or accident, produced by the work, would not have been sufficient to cause the resulting disability or death in the absence of pre-existing disability is not material. The employer accepts the employee as he finds him.

Disability or death, occurring during the course of the employment, from the natural progress of a non-industrial disease or injury which pre-dates the employment, or even from one which has its onset during the employment tenure, but is otherwise unrelated to the employment, is not compensable. Mere exertion at work, which is not greater than that ordinarily incident to the particular employment, but which combines with pre-existing non-industrial disease or disability to produce disability or death, is not compensable as an accidental injury or death.

If the evidence in the particular case shows that it is just as likely that the disability or death resulted from the natural course of a disease or injury, not produced by the work, as it is that the disease or injury was materially aggravated and altered in its course by a superimposed work-produced injury or illness, then the claimant has not sustained his burden of proof. Speculative aggravation is insufficient when the known course of the pre-existing disease or disability is expected to produce the same course of events.

When the aggravating industrial factor occurs subsequent to and is superimposed upon a previous non-industrial disease or accident, if the effects of the aggravating influence can be clearly or reason-

ably delimited, then the compensation may end where this aggravating influence ceases to play a role in the continuing symptomatology. For example, a person with hypertrophic arthritis of the spine may suffer a worked-produced acute back sprain or strain. There may be an interplay or mutual aggravation of symptomatology of the two conditions over a period of some weeks. Following this period, however, the symptomatology produced by the acute back sprain or strain will cease to operate, and the continuing symptomatology may be due to the pre-existing hypertrophic arthritis alone. A workman with a metastatic bone carcinoma may, through trauma at work, suffer a pathological fracture and subsequent disability. Such disability might be compensable for as long as it lasts. However, when death, due to the neoplastic process, eventually supervenes, the death itself should not be compensable.

The term aggravation also enters the field of Workmen's Compensation in other respects:

1. A disease or injury originally compensable may be aggravated by a superimposed injury or illness following naturally in the course of events, though not work-produced, per se, or it may be aggravated by injudicious treatment. In either event, the resulting disability or death is compensable.
2. An industrial accident or disease may be aggravated by a supervening industrial accident, illness or exposure associated with a different employer. This occurs frequently in silicosis. Here the claim is properly made against the second employer.
3. An industrial illness or disability may be aggravated by a pre-existing non-industrial disease or disability. Here again the doctrine that the employer accepts the employee as he finds him may be applied.

The Industrial Accident Commission has some access to impartial medical advice and may take administrative cognizance of sound medical principles where medical testimony is not presented in the hearing of a claim, on behalf of either party. In cases where there is medical testimony submitted,



the Commission cannot ignore such testimony in reaching its decision. The courts, in general, must decide each case on the evidence and the testimony presented in that case. If such testimony is not consistent with sound medical principles, if speculation is labeled as fact, or if sound opposing testimony is not submitted, the result of the case may be warped.

The term "material aggravation" has been used interchangeably with "aggravation" many times. It is probable that a material aggravation is necessary before sufficient scientific evidential criteria are present to take the situation beyond the realm of speculation. The law does not require complete scientific proof of aggravation, but on the other hand, physicians, as men of science, should not rely on "*post hoc ergo propter hoc*" relationships, without additional evidence.

The bulk of troublesome cases today, from a medical viewpoint, arise with reference to aggravation of a pre-existing disease or disability by an indus-

trial accident or illness. Those pre-existing diseases which produce the most difficult problems fall in the group of metabolic or degenerative diseases, including malignant neoplasms and diseases of the vascular system, skeletal system, nervous system, and organs of hearing and sight, or in the group of mental disorders.

Too strict an interpretation of the doctrine of aggravation may deprive the workman of the benefit of a law designed primarily for his protection. On the other hand, too liberal an interpretation may create general health insurance for a small group at the expense of the consumer population at large and create a class of medically unemployable persons, such as diabetics, or persons with prior coronary heart disease, even though these persons remain physically able to perform many employment activities.

---

Contributed by Charles W. Whitmore, M.D., LL.B., University of Virginia Hospital and Medical School, Charlottesville, Virginia.

---

## BOOK ANNOUNCEMENTS

**Review of Physiological Chemistry.** By HAROLD A. HARPER, PH.D., Professor of Biochemistry, University of San Francisco, Lecturer in Surgery, University of California School of Medicine; etc. Fourth Edition. Lange Medical Publications, University Medical Publishers, Los Altos, California. 1953. 328 pages. Price \$4.00.

**Respiratory Diseases and Allergy.** New Method of Approach. By JOSEF S. SMUL, M.D., Associate Castro-Ent. Beth David Hospital; Clinical Assistant Physician, Beth Israel Hospital, New York; etc. Medical Library Company, New York. 1953. 80 pages. Price \$2.75

**Cure Your Nerves Yourself.** By LOUIS E. BISCH, B.A., M.D., PH.D. Wilfred Funk, Inc., New York. 1953. 247 pages. Price \$3.50.

**Films in Psychiatry, Psychology & Mental Health.** By ADOLF NICHTENHAUSER, M.D., MARIE L.

COLEMAN, and DAVID S. RUHE, M.D. Medical Audio-Visual Institute of the Association of American Medical Colleges. Health Education Council, New York and Minneapolis. 1953. 269 pages. Price \$6.00.

**The Nursing Mother.** A Guide to Successful Breast Feeding. By FRANK HOWARD RICHARDSON, M.D., F.A.C.P., F.A.A.P. Prentice-Hall, Inc. New York. 1953. 204 pages. Price \$2.95.

**Pathology.** Edited by W. A. D. ANDERSON, M.A., M.D., F.A.C.P., Professor of Pathology and Chairman of the Department of Pathology, University of Miami School of Medicine; Director of the Pathology Laboratories, Jackson Memorial Hospital, Miami, Florida; etc. Second Edition. St. Louis, The C. V. Mosby Company. 1953. xv-1393 pages. With 1241 Illustrations and 10 Color Plates. Price \$16.00.

PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.  
*State Health Commissioner of Virginia*

Diphtheria

Those who studied bacteriology a good many years ago will remember that the Klebs-Loeffler bacillus causes diphtheria, while more recent students of bacteriology will recognize the etiologic agent as *Corynebacterium diphtheriae*. Regardless of the period to which one belongs, everybody recalls that the disease is more common in fall and winter months and in temperate zones. These facts fix our attention on diphtheria now, during the prevailing season in a temperate climate.

It is interesting to have a look at the morbidity and mortality of diphtheria in Virginia from 1920 to date:

procedure is recommended: From 2 to 6 months of age two adequate doses of diphtheria toxoid, with pertussis vaccine, should be administered within a one-month interval. This basic course of inoculations must be reinforced by at least one booster dose within 3 to 12 months. If diphtheria is to be more effectively controlled, the giving of reinforcing doses in preschool life, on entrance to school, and throughout school life and early adulthood, must be considered. Immunization should not be neglected in infancy, but in those cases when failure to immunize has occurred, the program should be carried through as soon as opportunity arises. Either fluid toxoid or alum precipitated toxoid may be given. The lat-

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Deaths
1920	269	183	134	127	71	85	74	140	430	1060	1050	747	4370	334
1930	226	181	144	81	70	61	60	106	186	337	395	313	2210	172
1940	72	59	56	47	29	25	19	53	44	89	128	88	709	51
1950	23	22	23	11	4	10	4	5	30	23	18	19	192	11
1951	14	18	12	8	11	5	4	4	12	38	41	27	194	8
1952	10	12	5	9	8	2	6	4	17	40	37	16	166	11
1953	20	9	15	1	3	3	2	3	7	9	8		80*	4*

\*Total to date, 1953

The general pattern of prevalence is followed with the highest number of cases in the fall and winter months. We note that in 1930 there were approximately one-half the number of cases of diphtheria that were reported in 1920. By 1940 only one-third the number of cases as in 1930, and in 1950 there were a few more than one-fourth the number of cases that existed in 1940. Likewise the number of deaths per year has fallen.

During the past three years several counties and two or three cities have been reporting a greater number of cases of diphtheria than the rest of the state. This higher incidence is in areas that are essentially rural or that have large Negro populations.

It has been thoroughly established that the remarkable reduction in diphtheria morbidity, with the resulting reduction in mortality, has been brought about through the widespread use of agents which produce active immunization. All children should be immunized against diphtheria. The following

ter preparation produces a more rapid response but may cause tissue injury, especially in adults.

The test for immunity commonly used is the Schick test. In making this test 0.1cc of a solution containing one-fiftieth of the minimal lethal dose of toxin is injected into the skin of the flexor surface of one forearm and a control injection is made into the corresponding area of the other forearm. The control material is the same toxin which has been heated to 60 degrees C. for fifteen minutes. A reading is made at the end of 24 hours and again at the end of 48 hours; in a positive reaction a wheal develops at the site of the first injection and increases in diameter to about 3 cm. or more and remains for a week. As it grows older the center becomes a darker red and may turn brown and desquamate. This result indicates susceptibility to diphtheria if there is no reaction around the control injection. Relative immunity is indicated by the lack of reaction of both arms. A limited, equal reaction in both arms would

indicate a protein reaction, known as a combined reaction. When this occurs, caution must be used in immunization.

Adults who are more apt to be exposed to diphtheria, such as medical students, interns and residents, nurses, hospital attendants and practicing physicians, should be Schick-tested and fluid toxoid may be given to those who show positive reactions.

It is the aim and object of the State Department of Health to have the number of cases of diphtheria in Virginia brought to an irreducible minimum and the number of deaths in the state from this disease to the zero mark.

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	Nov. 1953	Nov. 1952	Jan.- Nov. 1953	Jan.- Nov. 1952
Brucellosis -----	4	9	56	43
Diphtheria -----	8	37	80	150
Hepatitis -----	247	172	2306	790
Measles -----	77	64	4742	15643
Meningitis (Meningococcic) -----	3	22	169	187
Poliomyelitis -----	41	43	721	666
Rocky Mt. Spotted Fever ---	0	3	59	78
Scarlet Fever -----	71	120	774	715
Tularemia -----	5	1	30	43
Typhoid & Paratyphoid ----	8	8	78	89
Animal Rabies -----	30	32	411	434

### Sensitivity to Penicillin Counteracted by Antihistamines.

Use of an antihistamine in conjunction with penicillin in a penicillin-sensitive patient may permit the patient to receive full benefit from the drug without danger of severe reactions, according to Dr. C. A. Beck, Chicago.

Writing in the November 28 Journal of the American Medical Association, Dr. Beck described the case of a 49-year-old woman who suffered from a bacterial infection in the lining of the heart. Because of her sensitivity to penicillin she was treated with numerous other antibiotics, all of which failed to alle-

viate the infection.

When the patient's condition became worse despite treatment, a penicillin-antihistamine regimen was instituted. No adverse reactions were noted and after several months of therapy she was discharged as cured, he added.

"This result is particularly significant because other antibiotics, to which the patient was not sensitive, failed to achieve the desired clinical response, and because of the severity of the previous penicillin reaction in the patient," it was pointed out by Dr. Beck, who is associated with the department of medicine at Michael Reese Hospital.



# Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Albemarle Hotel Building, Charlottesville, Va.

Reprints of this and preceding Bulletins may be obtained from this office

January 1, 1954

## Tumors in Children

Based on the Pfizer Spectrum in the J. A. M. A.,  
Nov. 28, '53.

The rapid increase in cancer deaths in people over 40 which has occurred during the past fifty years causes us to minimize the incidence of cancer in children. Yet in children aged one to 14, cancer causes 10 per cent of the deaths due to disease. Cancer mortality in children aged one to four is nearly twice that at nine to 14. In children

aged three to 14, accidents cause the greatest number of deaths, cancer the second greatest number.

The kinds of malignancies seen most frequently in children are not those seen most frequently in adults, and their behavior is different. The following tabulation of information about the most common childhood malignancies may be helpful.

	Signs and Symptoms	Primary Site	Diagnosis	Treatment in an Attempt at Cure	Survivals	Palliative Treatment
Leukemia	Hemorrhagic phenomena. Bone and joint pain Anemia Thrombocytopenia Leukopenia or leukocytosis Immature leukocytes in peripheral blood		Bone marrow biopsy	None	Remissions but no cures	Antifolic acid drugs Corticotropin Cortisone Radiation therapy
Neuroblastoma	Abdominal mass Mediastinal mass Hepatomegaly Exophthalmos Bone pain	Adrenal Retroperitoneal region Posterior mediastinum	Histologic examination of primary tumor	Surgical removal of primary tumor followed by radiation therapy	30 per cent three-year survivals — a few cases considered cured	Radiation therapy Nitrogen mustard Antifolic acid Corticotropin Cortisone
Wilms' Tumor	Abdominal mass	Kidney	Histologic examination of primary tumor	Nephrectomy Postoperative radiation	47 per cent two-year survivals — a few cases considered cured.	Radiation therapy
Intracranial Neoplasms	Vomiting Headache Visual disturbances	Usually infratentorial	Histologic examination of primary tumor	Surgical removal Irradiation of medulloblastoma	Varies with type and site of neoplasm — 13 per cent five-year survivals	Radiation therapy
Ewing's Tumor	Pain Tumor	Often in bones of legs but may occur in any part of skeleton	Roentgen examination plus histologic examination of primary tumor	Irradiation only? Amputation when in an extremity?	Long term survivals rare	Radiation therapy
Osteogenic Sarcoma	Pain Tumor	Usually in bones of legs	Roentgen examination plus histologic examination of primary tumor	Amputation	A number of five-year survivals without recurrence	Radiation therapy

It should also be noted that there are a few cases of lymphosarcoma in children which are considered cured, and that a number of cases of retinoblastoma have been treated successfully.

So the outlook for children who develop cancer, while grey, is not the complete black still pictured by many people. And best of

all, the picture is growing brighter all the time.

To give these youngsters their best opportunity for successful therapy, the lesions must be discovered early. Cancer should be suspected, not only when the signs and symptoms tabulated above are found, but whenever a baffling illness or disturbance of development or behavior is encountered.





## THE MEDICAL SOCIETY OF VIRGINIA

## Annual Public Relations Conference

The Annual Public Relations Conference of The Medical Society of Virginia was held on Tuesday, November 24, at Richmond's Hotel John Marshall. The Conference was attended by forty-four physicians, representing twenty-three component societies, and 27 ladies, representing 22 active or potential auxiliaries.

Dr. Vincent W. Archer, President of the Society, and Mrs. K. W. Howard, President of the Woman's Auxiliary to The Medical Society of Virginia, opened the Conference with words of welcome, after which the presiding officer of the morning session, Dr. James P. King, was introduced.

The value of an Auxiliary was stressed by Dr. Frank J. Holroyd, member of the West Virginia Council, who said, "The most valuable thing we learned in West Virginia was the value of an auxiliary." He added that the ladies have gone on to push—successfully, too, for a medical school, to sparkplug a nurse recruitment program, to support blood banks, tuberculosis and health clinics. In addition, they sponsor a doctor's day and a health week. A special project the ladies undertook was to make and sell paper flowers at the state convention. The men buy them and the women wear them instead of orchids and the money goes to the American Medical Education Foundation.

A step by step blueprint on "How to Organize an Auxiliary on a Local Level" was then presented by Mrs. Maynard R. Emlaw, President-Elect of the Woman's Auxiliary to The Medical Society of Virginia. It was pointed out that with 46 component societies and only 12 active auxiliaries, there exists a real organization job.

A public relations program for the state and local auxiliaries was outlined by Mrs. R. M. Reynolds, Norfolk, Chairman of the Public Relations Committee of the State Auxiliary. Mrs. Reynolds stressed the fact that an informed membership is the best possible basis for a sound public relations program.

Successful auxiliary projects were then described by a panel moderated by Mrs. Leo J. Schaefer, Salina, Kansas, President of the Woman's Auxiliary to the American Medical Association. Mrs. J. R. St. George, Norfolk, told how future nurses' clubs are organized in the Norfolk area. A report on the activities of

the Hospital Guild for the Petersburg General Hospital was presented by Mrs. Herman W. Farber. The Guild helps in sewing and mending, mail delivery, hostess work, etc. The Richmond Auxiliary's luncheon to acquaint civic club leaders with health needs and activities was described by Mrs. Custis L. Coleman. Mrs. M. W. Glover told how the Arlington Auxiliary sponsors sales of articles made by patients at Blue Ridge, Catawba and Pine Camp sanatoria and the Woodrow Wilson Rehabilitation Center. The "Working with other groups" approach to good PR was described by Mrs. Paul C. Pearson of the Northern Neck Auxiliary.

The Conference luncheon featured a talk by Dr. W. W. Bauer, Director of the Bureau of Health Education of the A.M.A., on "Patients and Impatience." Dr. Bauer told of what great effect "little things" have on good PR and quoted several letters recently received by the A.M.A. which proved his point.

With Dr. John T. T. Hundley, Lynchburg, presiding, the afternoon session was opened by Dr. Christopher J. McLoughlin, Atlanta, Georgia, who explained just how medical public forums are sponsored by the Atlanta society. He lauded the efforts of the Atlanta newspapers and stated that the forums could not have been presented without their help. According to Dr. McLoughlin, the forums are attended by "standing room only" crowds.

As a follow-up, Mr. Jack Kilpatrick, Editor of the *Richmond News Leader*, commented on the possibility of presenting a series of forums in Richmond, and expressed the belief that his paper would cooperate in every way possible. Mr. Howard Hamrick, of radio station WRNL, was optimistic concerning the radio appeal of such forums.

The T-V film "Operation Herbert" was shown in order that the group might become acquainted with the type of films available through the A.M.A. It was brought out that this film and a short series entitled "What To Do" have proven quite popular with television stations generally and their message is most worthwhile.

A short demonstration of the proposed joint PR Course for Physicians and Office Personnel was given with the request that those present inform the state office of their reactions. The demonstration



Left to right: Mrs. J. R. St. George, Mrs. M. W. Glover, Mrs. Herman W. Farber, Mrs. Leo J. Schaefer, Mrs. Paul C. Pearson, Mrs. Custis L. Coleman, and Mrs. R. M. Reynolds



Left to right: Mrs. Leo J. Schaefer, Dr. John W. Davis, Jr., Dr. W. W. Bauer, Mrs. Maynard R. Emlaw, Dr. James L. Hamner, and Mrs. Christopher J. McLoughlin



was highlighted by a playlet depicting the right and wrong ways of handling office telephone calls.

Dr. Charles Caravati, Richmond, Chairman of the Society's special committee on Federal Medical Services, reported the stand of the A.M.A. (and The Med-

ical Society of Virginia) on the care of veterans with non-service connected disabilities (excepting tuberculosis and psychiatric or neurological disorders). Dr. Caravati urged those present to acquaint themselves with the issues in order that all physicians can be properly informed.



Left to right: Mrs. K. W. Howard, Mrs. Maynard R. Emlaw, and Mrs. Leo J. Schaefer

### A.M.A. PR Conference

The Sixth Annual PR Conference of the American Medical Association was held at the Jefferson Hotel in St. Louis on November 30.

Dr. Walter B. Martin, Norfolk, President-Elect of the A.M.A., delivered the keynote address and described medical public relations "not as a means of putting ourselves in a better light before the public but as a way by which we can learn better how to serve the public."

Speaking to an audience of more than 300 physicians and medical society public relations personnel, Dr. Martin continued, "If our judgment is given honestly and fearlessly for the common good, it should and will carry weight. If it is founded on ignorance or colored by self interest, it will be disregarded."

The luncheon session featured a talk by Dr. Leo

H. Bartemeier, Detroit, Chairman of the A.M.A. Committee on Mental Health, who said that failure to understand what motivates patients tends to alienate them from physicians. He urged doctors to try to understand such basic motives as fear and a feeling of insecurity.

During a morning symposium on "Making a PR Program Work", Dr. Josephine Renshaw, Washington, D. C., pointed out the need of a new name for public relations. "Public Information and Service" was suggested as a good substitute.

Speaking in a similar vein during an afternoon session on "Mending Our PR Fences", Dr. David W. McCarty, Longmont, Colorado, suggested that Grievance Committees be called "Mediation" or "Public Service" committees. It was brought out that many believe the word "grievance" to be too direct and harsh.



project for the year and each member is urged to do all she can to interest young girls in becoming nurses. The chairman, Mrs. R. T. Arnest, reported that thirteen girls have shown interest in nursing.

Seven of the nineteen members were present at the State meeting in Roanoke, and Mrs. Liggan took part on the panel discussion at the State Public Relations meeting in Richmond.

All officers were re-elected for a second term as follows: President, Mrs. Lee S. Liggan; president-elect, Mrs. M. B. Lamberth, Jr.; vice-president, Mrs. E. T. Ames; secretary, Mrs. A. B. Gravatt, Jr.; treasurer, Mrs. Paul Pearson; corresponding secretary, Mrs. R. E. Booker; historian, Mrs. C. Y. Griffith; and parliamentarian, Mrs. M. H. Harris.

#### Newport News-Warwick.

A meeting of this Auxiliary was held on November 18th at the home of Mrs. John F. Gayle. The president, Mrs. Barnes Gillespie, presided.

Mrs. William M. Goldsmith reported \$347.00 was made on the Christmas bazaar.

Mrs. Thomas N. Hunnicutt, Jr., spoke on Nurse Recruitment and suggested that prospective nurses be contacted through the local high schools, and clubs be organized to familiarize the students with some of the duties of the nursing profession.

The next regular meeting of the Auxiliary will not be held until January because of the dinner dance given by the Newport News-Warwick Medical Society for their wives on December 12th.

BESSIE G. AMORY, *Publication Chairman*

(MRS. GUY C. AMORY)

#### Arlington.

A luncheon meeting was held on November 10th at the Washington Golf and County Club. Dr. John T. Hazel gave a short, but informative talk, on the A.A.P.S. Essay Contest, to be held in the High Schools throughout the State of Virginia and sponsored by the County Medical Societies, regarding Government Controlled Medicine.

Guest speaker for this meeting was Mrs. Mary Baines of Mary Baines Gifts who favored us with a most general display of lovely Christmas gifts and decorations. She also gave us numerous new ideas

for the coming holidays.

This chapter also sponsored the T.B. Handicraft sale on December 4-7. All articles were handmade by the shut-ins and handicapped in the various sanitariums in that area. Two of the leading banks in Arlington allotted space for booths for this sale and these were staffed by auxiliary members.

EARLE MITCHELL

(MRS. ROBERT H. MITCHELL)

#### Norfolk.

Mrs. R. M. Reynolds, member of the Norfolk County Auxiliary and State Chairman of Public Relations, planned the panel discussion for the Public Relations meeting of The Medical Society of Virginia held in Richmond, November 24th. Representatives from this auxiliary also participated in the panel discussion which was moderated by Mrs. Leo J. Schaesser, President of the Auxiliary to the American Medical Association. Mrs. J. R. St. George, president, discussed the projects for the year, one of which is the organizing and sponsoring of Future Nurses Clubs. The Norfolk Auxiliary has had two Future Nurses Clubs in successful operation for the past two years—one at the Granby High School which uses the facilities of DePaul Hospital and one at Maury High School which is associated with the Norfolk General Hospital. The first year six members entered schools of nursing. A third club is to be organized at the Norfolk Catholic High School. The members of the Future Nurses Clubs were guests at a tea on December 15th at Norfolk General Hospital.

Mrs. James Price was general chairman for a luncheon and fashion show given for the visiting wives of the Seaboard Medical Association held in Norfolk on November 15th.

At the November meeting of the Auxiliary, Mrs. James L. Thomson spoke on "The Hurry and Worry Diseases."

#### Mrs. Maynard R. Emlaw,

Richmond, who is president-elect of the Woman's Auxiliary to The Medical Society of Virginia, was elected third vice-president of the Southern Medical Association Auxiliary at its recent meeting in Atlanta.



## EDITORIAL

## Marvin Pierce Rucker, M.D., LL.D.

DR. Marvin Pierce Rucker was born January 6, 1881 in Fairfax County, Virginia. Graduated from Randolph Macon College at the age of eighteen he began the study of medicine at the Medical College of Virginia but, after one year and a summer course at Harvard, transferred to Johns-Hopkins Medical School where he received the degree of M. D. in 1903. While at Hopkins he came under the direct supervision of that school's early great teachers, Osler, Welch, Halstead, and Kelly, an experience that exerted a lasting influence upon his subsequent career. After a brief sojourn at the University of Leipzig in Germany he returned to what was then Manchester and began general practice in partnership with his father, Dr. Edwin T. Rucker.

From 1905 to 1912, Dr. Rucker served as a member of the Manchester Board of Health and, during that period, he discovered an epidemic of amebic dysentery, a disease hitherto unknown in that area. With a large and exacting general practice his interest in obstetrics and gynecology grew and, after 1915, his work was limited to that field. From 1903 to 1930 he taught in the Medical College of Virginia in various capacities from demonstrator in histology and embryology to associate professor of obstetrics. For thirty years he headed the department of obstetrics of Johnston-Willis Hospital and, in 1940, was lecturer on the history of obstetrics at Duke University. Under the auspices of the Richmond I.V.N.A. he organized the first prenatal clinic for indigent mothers in Richmond and one of the first in the south.

Always an active participant in medical organizations, Dr. Rucker became a conspicuous figure in many societies. He served as president of the Richmond Academy of Medicine in 1937; president of the Medical Society of Virginia, 1948; president of the Richmond Obstetrical and Gynecological Society, 1947; president American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, 1934; president South Atlantic Association of Obstetricians and Gynecologists, 1940; vice president American Gynecological Society, 1947 and as honorary vice president of the Medical Library Association. He was also chairman of the Section on Obstetrics and Gynecology of the American Medical Association in 1937 and chairman of the corresponding sections of Southern Medical Association in 1927. From its beginning he was a diplomate of the American Board of Obstetrics and Gynecology.

Beyond the immediate demands of his practice, Dr. Rucker had many interests. He was a regular contributor to medical literature both in the field of his own specialty and in medical history. For ten years he edited the VIRGINIA MEDICAL MONTHLY and one of his last efforts was the preparation of an editorial for that journal. His Floral Eponyms constituted an unique contribution to medical literature. For many years he served as trustee of Randolph Macon College and, from that institution, he was awarded the degree of LL.D. in 1936. He was also chairman of the Board of Stewards of Centenary Methodist Church, a director of the Central Y.M.C.A., and a director of the Johnston-Willis Hospital. He became a member of the Richmond Board of Health in 1946 and was chairman of that body from 1950 until he resigned shortly before his death.

While the foregoing chronicle denotes a life of vigor and usefulness far beyond the ordinary, it fails to portray those qualities of personality that characterize the man. As a doctor, Pierce Rucker was more than a highly trained and efficient specialist. To his patients he was always the wise physician, counselor, and friend. To his colleagues

he was the scholar whose interests were unbounded and whose store of information was truly astonishing. To his fellow citizens he was one who was always ready to contribute his time and talents to the common welfare and who could be counted upon to discharge faithfully any task he undertook. Modest and retiring in manner, he did not seek publicity and sometimes gave the impression of shyness.

In 1906 Dr. Rucker married Miss Josephine McRae, a descendent of an old Manchester family, who survives him with a daughter, Mrs. Lewis F. Powell, Jr., and two sons, Drs. Edwin and Douglas Rucker, both of whom were associated with their father in practice. Their lovely home, with its spacious grounds overlooking and within sound of the falls of the James, offered an ideal retreat for whatever leisure hours the doctor's busy life yielded. It was within its walls, close to his magnificent and meticulously indexed library and with a view from his window of his well loved flowers and trees, that Dr. Rucker spent most of the last two years of his life.

Fully aware of the presence and the relentless progress of a disease for which there is no known cure, he faced his future with a degree of courage and serenity of spirit that will provide a lasting inspiration to all who came in contact with him. He even made a thorough study of the literature relating to the disease from which he suffered and wrote a masterful summary that was published as an editorial in the VIRGINIA MEDICAL MONTHLY. His constant thought was of contributing all that his waning strength would permit.

Dr. Rucker's death removed from the medical profession a member of rare talent and achievement and, from the community, one of its most loyal and productive citizens. His loss will be sorely felt.

HENRY W. DECKER, M.D.

EMILY GARDNER, M.D.

FRANK S. JOHNS, M.D.

J. MORRISON HUTCHESON, M.D., *Chairman*

---

Among patients admitted to general hospitals, the prevalence of definite and suspected tuberculosis and of probably active tuberculosis is twice as high as among individuals X-rayed in mass surveys. Thus 14 (1.4 per cent) of every 1,000 patients show on admission X-ray the presence of definite or suspected tuberculosis as against seven for every 1,000 in mass surveys. Two of every 1,000 X-rayed on admission to general hospitals show probably active tuberculosis as against one for mass surveys. N.Y.S. Dept. of Health, Div. of TB Control, 1952 Annual Report.

## SOCIETIES

### Wise County Medical Society.

Twenty-seven were present for the dinner meeting of this Society at Hotel Norton, Norton, on the evening of November 11, 1953. Dr. William R. Culbertson, Jr., of the Faculty of the University of Cincinnati spoke on "Antibiotics in Surgical Infection", the lecture being illustrated by pictures in color. He and his associates have done considerable research in antibiotics and have made substantial advances in our knowledge of them.

Dr. W. B. Barton gave an interesting report on the Roanoke State meeting.

The Community Blood Bank in Norton was discussed in detail by Blaine Hale, the Manager, and R. P. Jenny, the Technician in Charge. A committee of three doctors, Dr. J. T. Phillips, Dr. L. N. Kirch, and Dr. C. P. E. Burgwyn, was appointed to work with the Blood Bank. All doctors who prescribe blood from the Bank will see that the family or friends will furnish three pints of blood for each two pints used, at the time the blood is prescribed.

T. J. TUDOR, M.D.

*Secretary*

### Richmond Academy of Medicine.

At the meeting on December 8, Dr. Charles L. Outland presiding, reports for the year were presented by various committees, officers elected, and the Christmas party was held as the closing event. Dr. Benjamin W. Rawles, Jr., named president-elect at the 1952 meeting, will become president at the first meeting in January 1954. Those elected to serve with him are Dr. R. D. Butterworth as president-elect, and Dr. W. Linwood Ball and Dr. H. St. George Tucker, Jr., as vice-presidents. Dr. John P. Lynch and Dr. William H. Higgins, Jr., were elected as new members of the Board.

### The Northern Neck Medical Association

Held its 1953 Fall meeting at the Tides Inn, Irvington, on November 5th. Dr. Spotswood Stoddard of White Stone and Dr. Roper Travis, Jr. of Montross were elected to membership. Dr. Harold Sisson of Warsaw was installed as president. Dr. N. R. Tingle of Nuttsville was named president-elect and Dr. M. J. Dailey of Reedville was elected secretary-treasurer. At this time, delegates and alternates were also elected to represent the society at the Washington meeting of the State Society.

### Roanoke Academy of Medicine.

At the November meeting, Dr. C. D. Nofsinger presiding, much detail business was discussed, following which papers were read by Dr. Charles A. Young, Jr., on Exophthalmus, and by Dr. Alfred L. Wolfe on Idiopathic Hypertrophy of the Heart. Both were discussed.

Dr. Hugh Trout called attention to the sectional meeting of the American College of Surgeons which is to be held in Charlotte, North Carolina, on February 1, 2 and 3.

The Program Chairman announced that the December meeting would be as a dinner at Hotel Roanoke, the guest speaker being Dr. W. A. Sodeman, Professor and Chairman of the Department of Internal Medicine at the University of Missouri School of Medicine, Columbia, Missouri. His subject would be "Amebiasis".

CHARLES B. BRAY, JR., M.D.

*Secretary*

### Danville-Pittsylvania Academy of Medicine.

At the meeting of the Academy on November 13, Dr. Vincent W. Archer, President of The Medical Society of Virginia, gave a most interesting and informative talk on the role of the physician in organized medicine today. Mr. Robert I. Howard, Secretary of the State Society, gave a more detailed account of the budget of the Society.

At this meeting the following officers were elected for the year 1954: President, Dr. John W. Hooker, Danville; vice-presidents, Dr. James D. Beaton of Gretna and Dr. M. H. McClintic of Danville; and secretary-treasurer, Dr. Jefferson D. Beale, Jr., of Danville.

WALTER C. FITZGERALD, M.D.

*Secretary-Treasurer*

### The Fourth District Medical Society

Held its regular meeting in the Conference Room of the Petersburg General Hospital, December 8, at 3:00 p.m., Dr. Edith Miller of Petersburg, presiding. Papers were presented Dr. Frank M. Blanton of Richmond on Diagnosis and Treatment of Anemias in Adult Life and by Dr. G. Watson James, III, also of Richmond, on Common Anemias in Childhood.

At the business session, officers were elected for 1954 as follows: President, Dr. Tyree Finch, Farm-



ville; vice-presidents, Dr. W. B. Bishop, Lawrenceville, and Dr. C. L. Saylor, Hopewell; secretary-treasurer, Dr. J. G. Graziani, Farmville; chairman of Steering Committee, Dr. Joseph Whittle, Colonial Heights. Following the meeting, the members and guests were entertained at a cocktail party by Van Pelt and Brown of Richmond, followed by dinner at Hotel Petersburg, as guests of the Petersburg Medical Faculty.

### **The Montgomery County Medical Society**

Held its fall dinner meeting at the William Preston Hotel at Blacksburg, on October 15. Dr. R. H. Grubbs of Christiansburg, President of the Society, presided. Thirty members and guests attended.

The medical staff of Virginia Polytechnic Institute took the members on a tour of the new infirmary. Following the business meeting, Dr. C. C. Smith, Superintendent of Catawba Sanatorium, addressed the Society, discussing the tuberculosis problem.

### **The Fairfax County Medical Society**

Met at the new home of Dr. T. B. McCord on Blake Lane, Fairfax, on November 10th. An unusually large group assembled to hear Dr. Alexander talk about his recent experiences in plastic surgery in Korea.

The plans for the annual dinner will be sent individually to the members before the next meeting. The meeting was adjourned and refreshments served.

On December 8th, the Society met at the home of Dr. Claude Cooper in Annandale at 8:30 p.m. Dr. Joseph Beinstein of Arlington was the speaker at this meeting.

Reported by  
ALICE H. KIESSLING, M.D.

### **Lynchburg Academy of Medicine.**

The regular meeting of the Academy was held on November 9th at the Lynchburg General Hospital. At this meeting, Dr. William Parson of the University of Virginia gave a review of current research problems.

FRANK N. BUCK, M.D.  
*Secretary*

### **The Virginia Peninsula Academy of Medicine**

Met on November 18 at the James River Country Club. The social hour began at 6 p.m., with dinner at 7. At 8 p.m., the guest speaker, Dr. George G.

Finney, assistant professor of Surgery at Johns Hopkins Medical School spoke on "Carcinoma of the Gall Bladder: Another Valid Reason for Cholecystectomy in Patients with Gall Stones". He has reviewed all cases of carcinoma of the gall bladder at Johns Hopkins and Union Memorial Hospitals for the past twenty years.

On December 16, after the usual social hour and dinner, the Society had the pleasure of hearing Dr. Wendell Muncie, Associate Professor of Psychiatry at Johns Hopkins Hospital, Baltimore. His subject was "Observation on the Actual Practice of Medical-Psychiatric Collaboration".

Dr. Chester D. Bradley and Dr. W. T. Watkins, Jr., both of Newport News, are president and secretary respectively of this Society.

### **Virginia Pediatric Society.**

The annual scientific meeting of this society will be at The Homestead, Hot Springs, Virginia, February 26 and 27. Dr. T. Stanley Meade of Richmond is this year's president.

### **Seaboard Medical Association of Virginia and North Carolina.**

The fifty-eighth annual meeting of this Association was held in Norfolk November 15, 16 and 17, under the presidency of Dr. Southgate Leigh of that city. It was considered one of the most successful meetings in several years, with seven guest speakers, all outstanding in their respective fields. The attendance was approximately two hundred. The guest speakers included Dr. J. Rudolph Jaeger and Dr. Thomas E. Machella of Philadelphia, Dr. Harvey Nelson of Minneapolis, Dr. Edward S. Orgain of Durham, N. C., Dr. Lemuel Bowden of New York City, Dr. Murray Copeland of Washington, and Dr. Houston Everett of Baltimore. Several entertainments added to the pleasure of those attending.

At the business session, the following officers were elected for the coming year: President, Dr. Edwin A. Rasberry, Jr., Wilson, N. C.; vice-presidents, Dr. George Carroll, Suffolk; Dr. A. R. Peter, Washington, N. C.; Dr. James Guy Price, Norfolk; and Dr. O. E. Bell, Rocky Mount, N. C.; secretary-treasurer, Dr. James M. Habel, Jr., (re-elected), Suffolk. The next meeting will be at Hotel Cherry, Wilson, N. C., November 14, 15 and 16, 1954.

## NEWS

### Virginia Physicians Guests of Eli Lilly and Company

Several physicians from the state of Virginia, together with their wives, visited Eli Lilly and Company November 18-20 and are pictured herewith. While guests of the Company at Hotel Lincoln, they inspected the Lilly Research Laboratories and toured pharmaceutical, biological, and antibiotic production facilities. On the social side, the guests were given receptions, luncheons, dinners and sight-seeing trips.

Hypertension". The program will be of a general nature and will include Dr. Charles G. Congdon of Bethesda, Maryland; Dr. John P. Collins of Durham, N. C.; Dr. R. Cannon Eley of Cambridge, Mass.; Col. Joseph L. Bernier, Washington, D. C.; Dr. Harry F. Dowling of Chicago; and Dr. Harry Walker of Richmond.

### A Conference on Asthma

Is to be held in the Medical School Auditorium of the University of Virginia on Friday, January 22.



*Left to right, first row:* Dr. and Mrs. Fred Renick, of Martinsville; Dr. and Mrs. William J. West, of State Farm; and Mrs. Edward Ames and Dr. Ames, of Montross.

*Second row:* O. M. Stevenson, Jr., Lilly representative in Richmond, who accompanied the group to Indianapolis; Dr. and Mrs. E. C. Bryce, of Richmond; Dr. and Mrs. Mark Williams, of Richmond; and Dr. William Sloan, of Petersburg.

The combined years of medical practice of Drs. Bryce and West total more than one hundred years.

### Clinical Conference in Suffolk.

The second annual Clinical Conference at the Louise Obici Memorial Hospital will be held in Suffolk on February the 10th. It will be an all-day affair, lasting from 10:15 a.m. until in the evening. Following a cocktail party and dinner, Dr. Thomas C. Fleming of the Department of Clinical Research of Hoffman-LaRoche, Inc., Nutley, New Jersey, will speak on "Drug Therapy in

In addition to members of the faculty, the guest speakers will be Dr. Wyndham B. Blanton of Richmond, Clinical Professor of Medicine and Chief of the Allergy Service at the Medical College of Virginia and vice-president of the American Academy of Allergy, and Dr. Susan Dees, Associate Professor of Pediatrics and Allergy, Chief of the Pediatric Allergy Service of Duke University, Durham, and a former vice-president of the American College of

Allergists. Registration should be made through the Office of the Dean, School of Medicine, University of Virginia, Charlottesville.

### **Keeping Up with the Times.**

It is interesting to note that when Dr. A. M. Wallace of Gate City was awarded his certificate by The Medical Society of Virginia at the Roanoke meeting for fifty years of practice of medicine, he flew his private plane to Roanoke and flew back the next day in time to resume his daily routine of service to his patients.

### **Mr. Larrick Honored by MCV.**

Students, faculty members and alumni of the Medical College of Virginia, Richmond, paid tribute to Mr. Jonah Larrick on November 20, in recognition of his thirty years of service as secretary of the College branch of the Central YMCA. During this time, Mr. Larrick has had a hand in virtually every program at the College involving recreation, athletics and social functions to make off-hours more pleasant for students and staff members. Special ceremonies were held in the Baruch Auditorium to honor him and present him with a gold key and other gifts in appreciation of his services to one and all.

### **The Virginia Trudeau Society**

Was organized in Richmond on December 12 to provide doctors with current information on the detection and control of pulmonary and other thoracic diseases, with especial emphasis on tuberculosis. Approximately fifty physicians attended the meeting and an interesting program was enjoyed with a panel discussion at a dinner meeting. Dr. E. S. Ray of Richmond was elected president, Dr. E. C. Drash of Charlottesville vice-president, and Dr. W. E. Apperson of Richmond, secretary-treasurer.

### **De Paul Hospital Staff,**

Norfolk, had a most interesting program on November 17, when Dr. Thomas H. Hunter, dean of the University of Virginia Medical School, and Dr. John B. Truslow, dean of the Medical College of Virginia, by invitation addressed the large number of doctors attending. They explained the value of internship in good hospitals giving the best in experience and guidance.

### **Captain E. Randolph Trice.**

On duty at Osaka General Hospital, addressed the Thirty-eighth Parallel Medical Society on No-

vember 13, on a dermatological subject. Captain Trice is a son of Dr. and Mrs. Ernest T. Trice of Richmond and a graduate of the Medical College of Virginia in the class of '47.

### **Dr. Lewis H. Bosher, Jr.,**

Assistant Professor of Surgery at the Medical College of Virginia, Richmond, delivered the annual Frank N. Hack lecture at the scientific meeting of the medical staff of Winchester (Va.) Memorial Hospital on November 18. Dr. William P. McGuire, chairman of the scientific program committee of the medical staff, introduced the speaker. Following the meeting, there was an informal gathering at the home of Dr. and Mrs. Hugh Clark for the staff and guests.

### **Parke, Davis & Company**

Announces the completion of a new 15,000-square-foot depot in the northeast section of Philadelphia, which was opened December 14. The ground provides adequate off-street parking. This comes under the supervision of the Baltimore branch office.

### **Dr. Emily Gardner,**

Richmond, has been appointed chairman of the Coordinating committee on crippled children's services of the Virginia Council on Health and Medical Care. She succeeds Dr. Louise F. Galvin, director of crippled children's services of the State Department of Health, who has headed the committee since its formation two years ago. Dr. Galvin will continue to serve on the committee.

### **The American College of Chest Physicians**

Has published a report of the Joint Committee on Chest X-Ray in which the statement is made that each physician should be encouraged to have a chest x-ray of all his patients; that every patient admitted to a hospital, private or public, should have a routine chest x-ray; and that the follow-up for all suspected lesions seen in chest x-ray surveys should be organized very carefully to assure that the patient comes under medical supervision.

### **A.M.A. Hawaiian Holiday Tour.**

A party of physicians and their wives are expected to take advantage of the American Medical Association's 13-day Hawaiian Holiday Tour which will follow the annual convention in San Francisco next June 21-25. The party will leave San Francisco aboard Pan American Airways Strato Clippers at



night of Friday, June 25 and arrive in Honolulu early next morning. After an 8-day stay on the islands, the return trip will be made by steamer which will dock in Los Angeles on July 8.

All of the reservations are being handled by W. M. Maloney, general agent, Room 711, 105 West Adams Street, Chicago.

**Dr. R. Finley Gayle, Jr.,**

Professor and chairman of the Department of Psychiatry and Neurology, at the Medical College of Virginia, Richmond, has been nominated as president-elect of the American Psychiatric Association and the nomination will be acted upon at the APA's annual meeting next May.

**Dr. Charles W. Dorsey,**

Recently of Roanoke, has moved to Galax where he will be engaged in practice.

**Doctors in Alcoholic Anonymous.**

The fifth annual International Group of Doctors in Alcoholic Anonymous will meet at the Mayflower Hotel, Akron, Ohio, May 14, 15 and 16. For information and reservations address: Doctors, Mayflower Hotel, Akron, Ohio.

This group of doctors in AA was formed five years ago with a few men from Western New York State. At last year's meeting there were present men from as far south as Florida and as far west as Colorado.

**Position for Officer in Psychiatry and Neurology.**

The U. S. Civil Service Commission has announced a new Medical Officer examination for filling the positions of rotating intern, \$2,800 a year, and resident in training in psychiatry and in neurology, \$3,400 to \$4,200 a year, in St. Elizabeths Hospital in Washington, D. C. Appointments are to begin on July 1, 1954.

Appropriate education is required, plus, for the resident positions, successful completion of a full

year's internship. No written test is required. Applicants must not have passed their thirty-fifth birthday (waived for persons entitled to veteran preference). Further information is available at many post offices throughout the country and at the U. S. Civil Service Commission, Washington 25, D. C. Applications will be accepted by the Executive Secretary, Board of U. S. Civil Service Examiners, St. Elizabeths Hospital, Washington 20, D. C., until further notice.

**For Sale—**

1 Baker machine. Walter S. Edmands. No. 3421. Volts 115.

1 Ultra violet machine. Burdick. 49098.

1 Microscope with glass cover and wooden case. Bausch-Lomb.

Prices reasonable. Apply to "Machines" care the Virginia Medical Monthly, P.O. Box 5085, Richmond, Va. (*Adv.*)

**Wanted—**

Physician for the Staff of the DeJarnette State Sanatorium, Staunton, Virginia. This is a psychiatric hospital of approximately 180-bed capacity. Starting salary \$8,400.00 to \$8,784.00. Apply to the Superintendent. (*Adv.*)

**Wanted—**

Sr. Staff Physician, 220 bed T. B. Hospital using Modern Therapy including Chest Surgery. Annual stipend \$6,552.00 to \$7,800.00 with nominal deductions for apartment and maintenance. Based on qualifications, appointee may be started in second or third step. Apply Medical Superintendent, Pine Camp Hospital, Richmond, Virginia. (*Adv.*)

**Needed—**

A physician. House and office available. Good location. High School. Wood Products Manufacturing Company factory. See Miss Clara Smith, Ladysmith, Virginia. (*Adv.*)

---

## OBITUARIES

**Dr. William Tate Graham,**

Richmond, one of the most widely known orthopedic surgeons in the South, died December 13 at a local hospital, after a long illness. He was a co-founder of the Crippled Children's Hospital in this city and was its surgeon-in-chief to the time of his

death. He had been a member of the State Board of Health for approximately forty years and was also for many years its president. Dr. Graham was eighty years of age and a native of Wythe County where he was also buried. After graduating from the University of Virginia in 1896, he practiced for

a short time in Wytheville before studying orthopedic surgery at the Children's Hospital in Boston and in hospitals abroad. He opened his offices in Richmond in 1913 and, during the infantile paralysis epidemic in 1919, Dr. Graham with Miss Nannie Minor, a Richmond nurse, set up a clinic which was the nucleus of the Crippled Children's Hospital. Dr. Graham was professor of Orthopedic Surgery at the Medical College of Virginia until his retirement in 1948. Two sisters survive him.

**Dr. Clifton T. Titus,**

Prominent physician of Bedford, died in a local hospital, November 21, after an illness of about a month. He was fifty-eight years of age and a graduate of the Medical College of Virginia in 1931. He practiced in Patrick County before moving to Bedford in 1942, where he had since taken a prominent part in the activities of that community. He was president of the Bedford County Medical Society, a member and a past vice-president and treasurer of the Virginia Academy of General Practice, and an active and interested member of The Medical Society of Virginia since 1935. His wife and three children survive him.

**Dr. George Colbert Tyler,**

Newport News, died November 21 en route home from a medical meeting at White Sulphur Springs, W. Va., death being due to a heart attack. He was fifty-six years of age and studied medicine at the University of Tennessee, Memphis, from which he graduated in 1924. He served in the Army during World War I and, shortly after graduating, he located in Heathsville. While there he joined The Medical Society of Virginia in 1925. He later moved to Newport News where he was a former health officer of that city and was a member of the old State Game Commission. He was a member of the medical staff at the Newport News Shipyard Clinic and a staff member at Riverside Hospital that city. Surviving are his wife, two sons, his mother and two brothers.

**Dr. Delbert Thornton Saffer,**

Who had practiced in Middleburg for the past twenty years, died December 6 from a heart attack. His wife and four children, three of whom were students in Virginia colleges, survive him. He was forty-eight years of age and a graduate of the Medical College of Virginia in 1930. He had been a member of The Medical Society of Virginia since

1934, had been a president of the Loudoun County Medical Society, and was a clinician at the Fauquier-Loudoun Health Center.

**Dr. Frederick Eugene Steere,**

Well known physician of Claremont, died in a Richmond hospital on November 29, aged 83 years. He was a native of Petersburg and graduated from the Philadelphia College of Pharmacy in 1893, later studying medicine and graduating from the Medical College of Virginia in 1909. He continued in active practice until about two weeks before his death. Dr. Steere joined The Medical Society of Virginia in the year of his graduation in medicine. Three sons survive him.

**Dr. Francis Musgrave Howell,**

Retired physician of Hopewell, was the victim of drowning while he was on his motor boat near Irvington, November 28, and apparently slipped and fell in the creek. He was seventy-seven years of age and had come to this country from England in 1910. He had practiced in Lynchburg and Hopewell in both of which places he had taken an active interest in the local societies. He had been a member of The Medical Society of Virginia since 1921. No near relatives survive him.

**Dr. Robert C. Kirkwood**

Of Hampton, died in the Kecoughtan VA Hospital, May 24, having been in bad health for some time. He was sixty-seven years of age and a graduate of Jefferson Medical College of Philadelphia in 1908. He had not been in practice since his return to Virginia several years ago. His wife and several children by a former marriage survive him.

**Dr. Robert S. Preston.**

On October 28, 1953, Dr. Robert Sheffey Preston died suddenly following a heart attack during the early morning hours.

Dr. Preston was born in Abingdon, Virginia, on July 31, 1885, and was a member of an old Southwest Virginia family. Several of his close relatives have attained prominence in the medical profession. For his college and professional education he attended Hampden-Sydney College, receiving his A.B. degree at that institution and going then to Princeton University for a year of postgraduate work. He then enrolled in the School of Medicine of Johns-Hopkins University where he received his medical degree. Following his graduation in medicine, he was

awarded an internship in Bellevue Hospital, New York, and on its conclusion had post-graduate medical work in Germany. Shortly afterwards he came to Richmond and engaged in the practice of Internal Medicine. His practice was interrupted at the beginning of World War I as he volunteered promptly for service and received his commission in the Army Medical Corps. He was assigned to Evacuation Hospital, Unit #10, and remained in France with this unit until the end of the war.

After the war he continued his medical practice until the time of his death. He served faithfully for many years as a member of the faculty of the Medical College of Virginia in the Department of Internal Medicine and was a long-time member of the staff of the Johnston-Willis Hospital. He was for many years a member of the Board of Deacons of the Second Presbyterian Church.

Dr. Preston always had a high sense of integrity and faithfulness to duty and in his practice he was uniformly painstaking and conscientious in the study and care of his patients. He was a man and a gentleman of the highest type.

BE IT THEREFORE RESOLVED THAT in the death of Dr. Preston the medical profession has lost a skilled physician and one who was a credit to his calling on account of his character, as well as his professional qualities.

BE IT FURTHER RESOLVED THAT a copy of this resolution be recorded in the minutes of the Richmond Academy of Medicine and that a copy be sent to the members of Dr. Preston's family.

Committee DONALD S. DANIEL  
WELLFORD C. REED  
DANIEL D. TALLEY, JR., *Chairman*

### Dr. George M. Maxwell,

77 years of age, born in Mecklenburg County, North Carolina, died September 24, 1953, after a lingering illness following a fractured spine. He was graduated at Davidson College in North Carolina and in June 1906 was graduated in medicine at Jefferson Medical College. After his graduation there he taught for several years at Davidson College and while here also engaged in general practice. He located in Roanoke in 1907 specializing in Otolaryngology and Ophthalmology.

Dr. Maxwell served in the Spanish-American War and World War I. He was past president of the Roanoke Academy of Medicine and a charter member of the Roanoke Kiwanis Club. He was honored by membership in many social, fraternal, and medical organizations. He was a member of the Raleigh

Court Presbyterian Church. He was especially gifted and fond of poetry. He is survived by his wife, nine children and twenty-five grandchildren.

Dr. Maxwell was held in high esteem by all who knew him. The Roanoke Academy of Medicine and the community have suffered a great loss in the passing of this fine physician, Christian gentleman and distinguished member.

We ask that our sympathy be extended to the surviving members of his family and that a copy of these resolutions be sent to them, spread in the minutes of this society, and a copy forwarded to the VIRGINIA MEDICAL MONTHLY.

GEORGE B. LAWSON, M.D.

W. R. WHITMAN, M.D.

GEORGE S. BOURNE, M.D.

### Resolutions on Dr. Robert Dennis Caldwell.

WHEREAS: Almighty God in His Infinite Wisdom didst remove from our midst our loyal friend and coworker in the Art of Healing, Robert Dennis Caldwell, M.D. on August 18, 1953, the Lynchburg Academy of Medicine requests that the following resolutions be spread upon the minutes of its meetings and that a copy be sent to his family and to the Virginia Medical Monthly.

BE IT THEREFORE RESOLVED: That the Lynchburg Academy of Medicine, his co-workers, the City of Lynchburg, the Medical Society of Virginia and his close personal friends have lost one, whose character, as evidenced by the high ideals with which he practiced his profession was outstanding in every respect. He was one who may be replaced, but whose place will never be taken in the hearts of his friends and those who knew him best.

BE IT ALSO KNOWN: That he was the first specialist in his field, Pathology and Bacteriology, to locate and practice that specialty in Lynchburg. He came to Lynchburg in 1921.

BE IT FURTHER KNOWN: That during his whole professional career, he rendered that service to the physicians, patients and hospitals of this community with an idealism and faithfulness to the truth and to the unbounding welfare of all who came under his care, rich and poor alike.

BE IT FURTHER RESOLVED: That we, the members of Lynchburg Academy, miss him sorely and extend to his wife, and his brothers and sisters our sincere and deepest sympathy, but that we feel that Divine Providence has supervened and taken unto Itself our beloved friend and co-worker for greater happiness in the Eternal Life to which we all some day hope to be summoned.

It is with sadness in our hearts that your committee hereby presents these resolutions to the Lynchburg Academy of Medicine for its approval.

Respectfully submitted:

JAS. R. GORMAN

W. B. PUGH

J. E. HAYNSWORTH



## For Rent or Sale:

Handsome Colonial Brick, concrete and steel two and one-half story building with Buckingham slate roof; formerly used as an 85 bed Mary Washington Hospital. This building is well lighted, steam heated, with emergency stand-by boilers, and completely Carrier air conditioned. Located on a quiet street, though only 3 blocks from center of business district with private parking lot.

The location offers a lovely view across an entire City block of private park to the Rappahannock River. Ideally arranged for a private hospital, doctor's offices or convalescent home.

**ROBERT B. PAYNE**

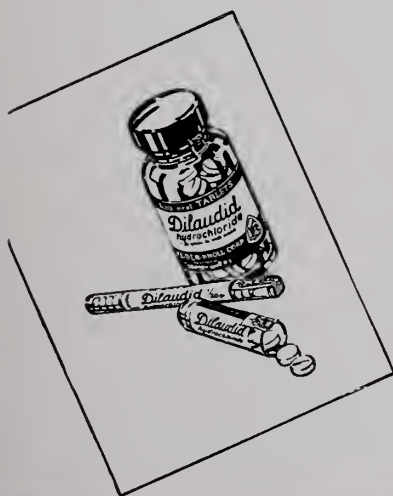
Box 595, Fredericksburg, Virginia

Phone 128

## *Dilaudid hydrochloride*

(dihydromorphinone hydrochloride)

COUNCIL ACCEPTED



Powerful opiate analgesic - dose, 1/32 grain to 1/20 grain.

Potent cough sedative - dose, 1/128 grain to 1/64 grain.

Readily soluble, quick acting.

Side effects, such as nausea and constipation, seem less likely to occur.

An opiate, has addictive properties.

Dependable for relief of pain and cough, not administered for hypnosis.

● Dilaudid is subject to Federal narcotic regulations. Dilaudid, Trade Mark Bilhuber.

# Bilhuber-Knoll Corp. Orange, N. J.

*the new basic concept  
in infant feeding...*

# Lactum

MEAD'S **LIQUID** FORMULA FOR INFANTS



Conforming in every respect to the latest and most scientific evidence on infant feeding, Lactum provides a clinically proved cow's milk formula, with demonstrated nutritional advantages, plus new convenience made possible by its ready-to-use liquid form.

Outstanding among Lactum's nutritional benefits is its generous milk protein content—providing a more-than-ample margin of safety above the Recommended Daily Allowance. Its natural milk fat not only supplies an effectively utilized source of calories but permits a uniformly smooth, perfectly homogenized formula. Supplementary carbohydrate (Dextri-Maltose) is incorporated for caloric adequacy and protein sparing.

Both in formulation and in manufacture, Lactum reflects Mead Johnson and Company's long experience in developing more effective products for infant feeding to meet the changing needs of the medical profession.

Lactum's time-saving convenience is welcomed by today's busy young mothers. They merely add 1 part Lactum to 1 part water for a formula supplying 20 calories per fluid ounce.

**MEAD**

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

# VIRGINIA MEDICAL MONTHLY

## *Contents*

- Guest Editorial, Carrington Williams . . . 53
- American Red Cross Blood Program, Howard H. Montgomery . . . 54
- Carcinoma of the Right Colon, T. Dewey Davis and Samuel W. Budd, Jr. . . 56
- The Surgical Treatment of Patent Ductus Arteriosus with the Report of a Case Complicated by  
Pneumococci Bacterial Endocarditis, Horace A. Albertson . . . 59
- Clinical Problems Created by Antibiotic Therapy, William H. Harris, Jr. . . 63
- Leuconychia Totalis, Carl S. Lingamfelter and Charles W. Whitmore . . . 68
- A General Hospital Admission X-ray Program,  
Alfred L. Kruger, Philip B. Parsons and Joe Lee Frank, Jr. . . . 69
- Guillain-Barre Syndrome: Report of a Case in Pregnancy and a Review of the  
Literature, H. S. Zfass, I. S. Zfass, C. E. Troland and T. R. Mack . . . 72
- Virginia's Health Rating, George Cooper, Jr. . . . 76

(Continued on page 6)

THE N.Y. ACADEMY  
OF MEDICINE  
FEB -2 1954  
LIBRARY

A MOST EFFECTIVE ANTIBIOTIC . . .  
**ILOTYCIN**  
(ERYTHROMYCIN, LILLY), ETHYL CARBONATE  
**PEDIATRIC**  
FOR MANY OF THE COMMON BACTERIAL INFECTIONS IN CHILDHOOD

ILOTYCIN • THE ORIGINAL ERYTHROMYCIN





# Chloromycetin<sup>®</sup>

(Chloramphenicol, Parke-Davis)

*truly one of the*

PARKE, DAVIS

# Virginia Medical Monthly

Vol. 81, No. 2  
WHOLE No. 1220

RICHMOND, VA., FEBRUARY, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## GUEST EDITORIAL

---

### The Cost of Medical Education

WITH the great increase in the cost of living, there has been a greater increase in the cost of Medical Education and of Medical Care. This increase in cost undoubtedly has resulted in better Education of students and better Care of patients, but I am afraid that Educators and Physicians have made use of new methods and new drugs to such an extent that the cost is much in excess of what it should be. Funds to meet these rising costs have increased but not in proportion to the need. Medical Schools operated by endowed institutions have had a decrease in available funds and appropriations for State and City supported schools have increased but not enough to meet the need. This deficit operation must be corrected. The schools and physicians should make strenuous efforts to reduce the cost of operations and patient care, and additional funds must be secured.

Your President last month pointed out the dangers of subsidization by the Federal Government and all of us must agree with his wise advice. We must also realize that the Federal Government is in a sense already subsidizing our schools by the enormous sums given them for research. During the last administration the Federal Government was apparently willing to subsidize the Medical Schools and some schools on account of desperate need appeared willing to accept the subsidy. Such a course will lead without doubt to Federal control of Medical Education and from that to Medical Practice.

The American Medical Education Foundation is sponsored by our A. M. A. Gifts to this Foundation can be earmarked for the school of your choice and will be sent there without deduction because the A. M. A. carries the overhead. Furthermore in most schools credit for such gifts are made in their Alumni Funds. Surely we doctors are deeply interested in keeping our Educational Institutions independent and solvent. As a group we can afford to help and we are under some obligation to help. I urge each member of the Medical Society of Virginia to contribute annually to the American Medical Educational Foundation.

CARRINGTON WILLIAMS, M.D.

## AMERICAN RED CROSS BLOOD PROGRAM\*

HOWARD H. MONTGOMERY, M.D.,  
Director, Blood Program,  
Eastern Area, American Red Cross,  
Alexandria, Virginia

The Red Cross Blood Program today is a successor to the program conducted during World War II, which collected a total of thirteen million pints. The present program was inaugurated in 1948 after consultation and planning with the American Medical Association and other interested groups. It had two objectives:

1. To supply whole blood and, as far as feasible its products, to physicians for treatment of their patients in everyday life.
2. To be a functioning blood collecting system in being across the nation as a standby in the event of a national emergency.

This second purpose showed the soundness of the plan in 1950 when our country was forced into combat activities in Korea. The fact that the program was actively operating enabled the Red Cross to immediately furnish our armed forces 80,000 units of serum albumin for front-line use and to start shipments of whole blood moving toward the Far East within a week. From that time until the 30th of June last, the Red Cross centers, aided by co-operating blood banks shipped 357,000 units of whole blood for use in Korea and collected approximately 5,000,000 units for processing into plasma for the reserve stocks of the armed forces and the Federal Civil Defense.

During the past fiscal year the 45 Red Cross Regional Blood Centers in the country collected a total of 4,436,000 units of blood for civilian use. Three of these regional centers furnish blood in Virginia: The Washington Center, Washington, D. C., opened in 1948 and supplies blood in 21 counties in the northern and central part of the state, as far south as Albemarle County; The Tidewater Center, which opened in Norfolk in 1949, supplies blood in 19 counties in the eastern part of the state; and the Roanoke Center, opened here in Roanoke in 1950, supplies blood in 31 counties in the western part of the state. Together these three centers furnished you 62,525 units of blood during the fiscal year ending June 30 last. These units were distributed

actually to 100 hospitals in Virginia where you gentlemen administered them. In considering these statistics, it is significant to remember that your largest city and the counties immediately adjacent do not participate in the Red Cross Blood Program for the supply of blood for civilian use.

The American National Red Cross, which conducts this program, extends into every community in the country through its chapters—more than 3,700 of them. Some have jurisdiction in only one city. Most of them have jurisdiction over an entire county. The chapter is the functioning unit of the national organization within its own jurisdiction and enjoys considerable autonomy in its operations. It is entirely dependent on the contributions of the citizens of the community for funds to carry on its work. A chapter consists of the citizens within its jurisdiction who have become members of the organization by their annual contribution. All members have the right to attend chapter meetings and to vote. Members of the chapter from all elements in the community voluntarily give their time and effort to conduct Red Cross activities for the community. Blood Program, as we know it, would not be possible without this voluntary participation by many individuals.

Each of the three centers supplying blood in the state of Virginia, and this applies to all Red Cross centers, is an activity of the chapter in the city in which it is located. The center is established as a base from which mobile units operate into the surrounding counties for the purpose of collecting blood. The blood so collected is returned to the center where grouping, typing and serology are performed. After this processing, it is delivered, upon order, to the hospitals within those counties. The responsible head of each of the centers is a physician assisted by other physicians, registered nurses, technicians and lay administrative personnel in numbers appropriate to the size of the operation. All of these staff members are employees of the chapter in which the center is located, not of the national Red Cross organization. The chapters participating in the program with each of the centers are responsible for

\*An address delivered by invitation before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.



recruiting the donors for the mobile unit visits to their community. They also provide the refreshments which are a part of the donor procedure. Volunteers perform these chapter duties.

Our centers operate under a license issued by the National Institutes of Health and observe the standards for medical and technical operations established by a national committee on medical policies and procedures. This committee is composed of leaders in various branches of medicine and the allied sciences, all of whom serve in a volunteer capacity.

The functioning of the program on the national level is coordinated by a staff headed by a physician, assisted by other physicians and members of appropriate allied specialties. Among their duties is the rendering of assistance to the centers with their problems, both professional and administrative, insuring that standards are maintained, operating a centralized purchase and supply system and representing the Red Cross in its relations with other national groups concerned with the supply of blood.

The chapters in Virginia which are participating in the civilian supply aspects of the Blood Program are participating in answer to a demand for this Red Cross service by the community of which they are a part. This desire had to be on a broader base than that of individuals directly active in the chapter. The people of the community had to be ready and willing to donate their blood and willing to contribute the necessary funds, for this is a costly program. The physicians had a major part in this community movement. They expressed their desire for this method of supplying the blood need of the community by formal action of the county medical society. The hospitals and public health officials also formally expressed themselves as favoring the program for the community. No chapter is permitted to participate in the Blood Program without the concurrence of these three groups.

Since this is a medical program to supply a precious and scarce therapeutic agent to physicians, provision is made for the physicians of each community to have a part in its operation. Each chapter

appoints, as a medical advisory committee, physician nominees proposed by the county medical society. The physician director of the center looks to this local medical advisory committee for advice and assistance in meeting the blood requirements of their community and the local chapter looks to it for advice, guidance and assistance. The medical advisory committee of the chapter which maintains the center has additional responsibilities in that the physician director of the center looks to it for advice and assistance in all professional problems arising in the operation of the center.

In summary, the Red Cross Blood Program is fundamentally a joint undertaking of physicians and lay-men in geographically adjacent areas who have agreed to cooperate through their local Red Cross chapters to supply the blood required in the territory concerned. It is a program directed by physicians to supply one of the fundamental requirements for the modern practice of medicine. It requires the support of all elements in the community, but, because of its very nature, merits the particular interest of the medical profession. To fully support, however, one should know the details of that which he is supporting. I suggest that an excellent method of learning about the Blood Program would be to visit the mobile unit the next time it is in your community—start at the beginning of the donor line, pass through the several steps, and emerge at the end with the pin which signifies a blood donation.

Your local chapter needs your assistance in its efforts to recruit donors—an assistance you can render in your daily contacts with your patients and their families. It needs your suggestions and good advice regarding appropriate types of publicity—it needs and would welcome your voluntarily tendered offer of assistance. The accomplishments of the three regional centers serving Virginia have been brought about through the hours of devoted service by volunteers, both from the profession and from the laity. It is only this devoted service that has made the Blood Program possible and that will lead to even more impressive accomplishments as we all continue to work together in this co-operative undertaking.

300323

## CARCINOMA OF THE RIGHT COLON\*

T. DEWEY DAVIS, M.D.,  
and  
SAMUEL W. BUDD, JR., M.D.,  
Richmond, Virginia

At the present time the only cure for cancer is surgery provided the lesion is detected before it has metastasized and this is particularly true in carcinoma of the right colon. We feel that the symptomatology of this lesion is poorly understood since most of the literature regarding it appears in surgical textbooks and periodicals. It is our purpose to review the symptoms in the hopes that an early diagnosis may be possible.

The right colon can be defined as that part of the large intestine that lies proximal to the mid point of the transverse colon in contrast to the left which lies distal to this point. It differs from the left in that its lumen is larger and its fecal contents are usually fluid in character. Furthermore, the characteristic malignant lesions appearing in these two parts of the colon differ. Lesions in the right colon are usually characterized by a projection from the intestinal wall into the lumen. This lesion may be a hard plateau-like elevation or may be polypoid in character. Lesions of the left colon in contrast are characterized by scirrhous invasion of the intestinal wall which produces a constricting lesion or napkin ring defect.

Because of these factors—the size of the lumen, the nature of the fecal contents and the character of the growth—symptoms produced by cancer in these two parts of the colon also differ. Carcinoma of the left colon most often produces obstruction early in the course of the disease and the patient complains of distention, constipation and passage of ribbon like stools with some blood and mucus present. Carcinoma of the right colon seldom produces obstruction and the patient usually complains of vague gastro-intestinal disturbances referable to the right side of the abdomen which the physician may attribute to chronic gallbladder disease or to chronic appendicitis. Sometimes symptoms of anemia, such as extreme weakness, may first bring these patients to a physician and this anemia may be very severe early in the disease due to the chronic seepage of blood from the polypoid lesion

into the intestinal tract or due perhaps to some poorly understood mechanism which prevents adequate absorption of iron and folic acid from the intestinal tract. Occasionally carcinoma of the right colon will produce no symptoms and is found accidentally when a patient is examined for another purpose.

Rankin, a surgeon, has divided the symptoms of carcinoma of the right colon into three categories: 1. Dyspeptic group which contains approximately 60% of the cases; 2. The group with anemia without visible blood loss, but with profound weakness and loss of weight and strength, 30% of cases; 3. The tumor group in which the mass is discovered accidentally, 10% of cases. In reviewing our cases we find that they fall in one of these categories and it is our intention to discuss several of each group in detail.

## DYSPEPTIC GROUP

*Case 1.* This 60 year old housewife had been a patient of ours for several years and because of her manifold symptoms had been diagnosed as an anxiety neurosis. She reported to our office on November 12, 1952, because of epigastric distress, gas and belching. Physical examination and blood count were negative and she was treated symptomatically but did not improve, and on January 18, 1953, she had such intense pain in the right lower quadrant that she was admitted to the Johnston-Willis Hospital as a possible case of appendicitis. The next day her pain had subsided and a gastro-intestinal series was performed which showed a carcinoma of the ascending colon. The patient was operated on and since then has done well. No metastasis was noted and it is hoped that her prognosis will continue to be excellent.

*Case 2.* This 43 year old woman, like the preceding case, had been an old patient of ours who had been seen for a good many symptoms. She reported to our office December 10, 1951, because of severe abdominal cramps and diarrhea following the use of a laxative. We saw her frequently after that because of vague gastro-intestinal complaints characterized by generalized colicky abdominal pain

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.

and alternating constipation and diarrhea, but it was not until she began to lose weight that a barium enema was performed on September 26, 1952, and a carcinoma of the cecum was discovered. At no time during this period was any abnormality noted on physical examination or blood count. Operation was successful and patient is doing well.

*Case 3.* This 56 year old colored female was first seen by us because of a palpable mass in the right lower quadrant and anemia of approximately 56%. During the previous year she had been seen by the Medical College Clinic and by other physicians because of gas, belching, an occasional episode of vomiting and weight loss. Physical examination and blood counts were normal. Two gastro-intestinal series were normal. Finally, when we saw her the diagnosis was evident and was confirmed by barium enema and operation.

These three cases illustrate that patients suffering with carcinoma of the right colon have no specific gastro-intestinal complaints. Often, because of nausea, vomiting and periumbilical pain, the clinician suspects a lesion in the upper gastro-intestinal tract and orders a gastro-intestinal series. The x-ray man concentrates on the stomach and duodenum and the colon is never thoroughly examined. The best means of demonstrating a lesion in the right colon is by barium enema for which the patient has been adequately prepared. Carcinoma of the right colon very seldom gives symptoms referable to the colon, although the second case complained of alternating constipation and diarrhea. In actual practice, diarrhea is infrequent and Bockus states, "alternating constipation and diarrhea in general is a most ballyhooed phenomenon that occurs only occasionally in cases of carcinoma of all parts of the bowel".

The first case is also interesting in that the patient was sent to the hospital as a possible acute appendicitis. In reviewing all the cases that have been seen in our office in the last fifteen years, I find two incidences in which the patient was actually operated on for appendicitis and the lesion missed at operation only to be demonstrated by barium enema one month later. Symptoms of these lesions may mimic those of gallbladder disease so that a diagnosis of chronic cholecystitis is suspected.

I feel that the first two patients are of additional interest in that both were considered to be neurotic and were not completely investigated at first. Neurotics can develop organic disease, and any change

in the character of their symptoms needs further search for a cause. It is very easy to overlook a carcinoma of the right colon in a neurotic when symptoms produced by it are as vague as these.

#### CASES CHARACTERIZED BY ANEMIA

*Case 4.* A 61 year old business man reported to our office on March 13, 1952, because of generalized weakness. He had been followed carefully because several years previously a malignant polyp had been removed from his rectum and frequent barium enemas had been reported negative. Examination on this visit revealed red blood count 4,000,000, hemoglobin 65%, and blood smear was reported typical of microcytic hypochromic anemia. He was given a prescription for iron and another barium enema was ordered. In two weeks time the hemoglobin had risen to 80% while red blood count still remained at 4,000,000. The barium enema revealed a polypoid lesion in the cecum and, on May 2, 1952, an operation was performed which confirmed the diagnosis, but there were metastases noted in the liver. Since operation the patient has done well even though the prognosis is hopeless.

*Case 5.* This 75 year old retired male reported to our office on November 13, 1952, because of weakness and inability to walk up two flights of steps to his apartment. Physical examination was negative, but his blood count revealed presence of a macrocytic anemia with a hemoglobin of 40%. Gastric analysis showed presence of free acid in the stomach and gastro-intestinal series was reported normal. Since the x-ray man felt that he had a satisfactory view of his colon, the patient was placed on treatment and received large doses of vitamin B<sub>12</sub> intramuscularly and iron and folic acid by mouth. At first he did well and red blood count rose to 3,200,000 and hemoglobin to 69%, but in February, 1953, he began to lose weight and his hemoglobin once again dropped. Another gastro-intestinal series was performed which revealed a napkin ring defect in the ascending colon which was confirmed at operation. Following surgery patient's blood count has been normal and he is in excellent health.

Carcinoma of the right colon may be first brought to the attention of the clinician because of severe anemia. Unlike cases of carcinoma of the stomach showing anemia, these patients may be cured by surgery and a high degree of anemia should not be



considered a poor prognostic finding. The mechanism of the anemia is not well understood, but certainly chronic seepage of blood from a polypoid lesion into the lumen of the intestine must play a role. The stools of these patients very seldom show evidence of frank blood and are rarely tarry in character. Nevertheless, 85% of these patients' stools will be guaiac positive. The majority of the anemias are microcytic hypochromic in character and respond well to iron, as our fourth case did. Such findings support the idea that the anemia is produced by chronic blood loss or iron deficiency. However, occasionally one finds a macrocytic anemia in these cases as we did in case number five. Patients have been reported in which the anemia simulated pernicious anemia and responded well to liver therapy at first. We can only speculate as to the etiology of this type of anemia, but somehow the lesion must interfere with the absorption of iron and folic acid from the small intestine. Case number five is the only example of macrocytic anemia in our series, and, in addition, is the only case in which the napkin ring defect was discovered in the right colon at operation. We feel that a combination of factors must enter into the cause of these anemias since it is difficult to conceive that chronic blood loss alone could be the explanation in the very severe anemias that have been reported without any evidence of visible blood loss.

#### TUMOR MASS DISCOVERED ACCIDENTALLY

*Case 6.* This 73 year old farmer was seen by his local physician in February, 1953, because of influenza. In the course of the examination the physician noted a large mass in the right upper quadrant. The patient had no symptoms at all referable to the

gastro-intestinal tract. Arrangements were made for admission to the Johnston-Willis Hospital and there a barium enema revealed a large tumor at the hepatic flexure. On March 5, 1953, an operation was performed and a large polypoid growth was removed which had already metastasized to the liver. Although the patient withstood operation well, prognosis is hopeless.

This case is representative of a small group of cases in which the growth is found accidentally. Recently we have had a similar experience. We were seeing a gentleman who was x-rayed because of a peptic ulcer, but in the course of the gastro-intestinal series the x-ray man noticed a deformity at the hepatic flexure. A barium enema was performed and revealed a growth here which was confirmed at operation. I am quite sure that this growth was asymptomatic and that here is another case in which cancer was found accidentally.

#### SUMMARY

We have reviewed the symptoms of patients suffering from carcinoma of the right colon and have discussed several cases in detail. We find that approximately 60% of the cases have vague gastro-intestinal symptoms usually associated with lesions of the upper gastro-intestinal tract rather than with the colon. Approximately 30% of the cases come to the physician because of weakness due to an anemia which is not associated with any visible blood loss. In about 10% of the cases a tumor mass is discovered accidentally which has produced no symptoms.

*501 East Franklin Street.*

---

## THE SURGICAL TREATMENT OF PATENT DUCTUS ARTERIOSUS WITH THE REPORT OF A CASE COMPLICATED BY PNEUMOCOCCI BACTERIAL ENDOCARDITIS\*

HORACE A. ALBERTSON, M.D.,

Department of Surgery, Jefferson Hospital,  
Roanoke, Virginia

I would like to preface any remarks I have to make this afternoon on patent ductus arteriosus with the statement that I do not pose as an authority on the subject; however, I thought it might be interesting to review this rather common cardiovascular anomaly that started the very extensive and wonderful work that has recently been done in cardiac surgery. Also, I would like to present to you a rather unusual case of patent ductus in that the anomaly was complicated by a bacterial endocarditis caused by diplococcus pneumoniae. This type of surgery got its real start in 1939 when Robert Gross first successfully operated on a patent ductus arteriosus. Recently he and his group report 611 cases.

The ductus arteriosus is an important vascular pathway in the fetus. In intrauterine life the blood is shunted from the pulmonary artery into the aorta. It is believed that shortly after birth, with the expansion of the lungs, there is a reduction in the pulmonary vascular resistance and a fall in pulmonary pressure. This results in a reversal of the direction of flow of blood through the ductus arteriosus. Gould has found it to be true that physiologically the ductus arteriosus as an effective channel is closed by the end of the second week after birth.

The degree of cardiac embarrassment depends on the age and size of the individual and the size of the shunt. While it is perfectly true that a number of patients have lived to a relatively old age with a definite patent ductus arteriosus, this is the exception rather than the rule. Gould, in quoting Bullock and associates, states that in a study of 80 cases, by the age of 14 years, 11 patients or 14% had died of their malformation. By the age of 30 years one-half the patients had died as a result of the patent ductus arteriosus; by the age of 40 years 71% of the patients had died. In a certain percentage of the childhood cases there is some impairment in

physical development, but there is practically never any impairment in mental development that can be attributed to the patent ductus arteriosus. According to Gross, there are some patients in their 30's or 40's that present themselves with no frank symptoms of cardiac failure but who state that they do not have their usual amount of pep or exuberance and who find carrying on their daily tasks a chore. These individuals are certainly limited in their effectiveness.

### DIAGNOSIS

An intelligent physical examination can diagnose about 95% of the cases of patent ductus arteriosus. To quote Gross, "It is important to emphasize that simple examination with stress upon an intelligent auscultation can lead to a rapid and accurate recognition of this congenital anomaly in more than 95% of the cases." Cyanosis is never found in this disease nor is there any clubbing or polycythemia. The peripheral arterial oxygen saturation is normal. The heart is usually normal in size. Patients with patent ductus arteriosus usually have a systolic blood pressure which is normal for their age, but depending upon the size of the ductus the diastolic pressure may be definitely reduced. The most important diagnostic sign in this condition is the murmur. It is heard characteristically in the second interspace just to the left of the sternum. It is a continuous murmur accentuated during systole, dying off somewhat during diastole. It has been described as a machinery type of murmur. A thrill similar to the murmur is usually present. Rarely a very tiny ductus or a very large ductus may produce a murmur that is only systolic in time. In these patients cardiac catheterization may help to clarify the diagnosis. Gross states that since more than 95% of all ducti give a continuous murmur, the diagnosis of an open ductus should not be made in the absence of such a murmur unless the diagnosis can be supported by incontrovertible evidence from catheterization studies. The electrocardiogram usually shows no abnormalities. There is in most cases no axis deviation. Flu-

\*Read before the Southwestern Virginia Medical Society in Pulaski, on September 17, 1953.

oroscopy of the heart usually shows the heart to be of normal size but there is usually some prominence of the pulmonary artery. It may be exceedingly difficult to diagnose patent ductus arteriosus in the first two years of life, since in infancy the blood pressure is low in the aorta and normally high in the pulmonary artery; there is no appreciable flow through the ductus, and there is no murmur. Later on the aortic pressure rises and the pulmonary pressure decreases; there is considerable flow through the ductus and the murmur becomes typical.

#### INDICATIONS AND CONTRAINDICATIONS FOR OPERATION

It is safe to state that in any patient in whom the diagnosis of patent ductus arteriosus can be made, it is probably wise to advise these people to have the ductus ligated or divided. In those who are showing signs and symptoms of cardiac failure, it is mandatory that the ductus be operated on. A goodly percentage of patients with patent ductus arteriosus will develop subacute bacterial endocarditis. Infection in almost every instance is due to streptococcus viridans. Whereas bacterial endocarditis today is not the very serious thing that it was before antibiotics, it is still a disease to be feared. Patients seen with bacterial endocarditis should be given a course of antibiotic therapy to attempt to sterilize the blood stream before operation is undertaken. The contraindications to operation, according to Gross, are those children who have any cyanosis and the auscultatory sounds of a patent ductus arteriosus. With these findings he states that the ductus should never be closed surgically because the patient is either in terminal failure from a large ductus or there is a ductus compensating some complicated cardiovascular anomaly.

The optimum age for operation is between the years of 4 and 20. Beyond the age of 20 the vessels begin to become arteriosclerotic in these individuals and the danger of tearing the vessels is great and the postoperative complications are more common.

Regarding the surgical treatment, the approach is through the left chest. There are two common methods: Dr. Alfred Blalock believes the great majority of these cases can be handled by ligation, and Dr. Gross believes very firmly that all of these patients should have a division of the ductus. I think that it is technically easier to ligate the ductus, but

I believe the surgeon should be prepared to go ahead and divide a ductus if it is necessary.

#### CASE REPORT

Patient—Miss R. B. E., Hospital No. 100776. This 20 year old, white female, was known to have had a cardiac murmur since the age of 5. Because of repeated sickness she had not gone beyond the 4th grade in school. She was seen by one of our internists in June, 1952, with a history of having had pneumonia in January, 1952, and since that time she had had right chest pain and shortness of breath. When seen in June she was running a low-grade fever and a tachycardia between 100 and 140. She was found to have a partial deafness and external strabismus on the left side. Her blood pressure was 100/60. The examiner felt at that time that there was a systolic murmur at the pulmonic area which radiated up the base of the neck and left shoulder and through the back to the scapula. He recorded a precordial thrust and a precordial thrill. There was definite dullness at the right base posteriorly and also some moist rales anteriorly over the mid portion of the right lung. WBC 6,800; RBC 3.9 million, hemoglobin 11.7 gm. Differential showed 1 eosinophil, 72 segs., and 27 lymphs. Electrocardiogram showed left axis preponderance. Chest film taken at that time is shown (Figure 1.)

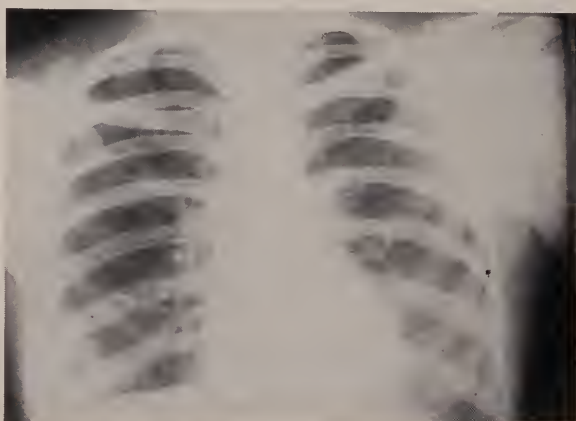


Fig. 1

Hospitalization was recommended, but due to welfare department difficulties she was not admitted to the Jefferson Hospital until September 4, 1952. She had remained moderately ill at home, complaining of chest pain which at the time of admission was originating from the left chest anteriorly. This pain on the left side began five days before admission.



She had no cough or sputum. In spite of a good appetite, she had continued to lose weight.

Physical examination revealed an acutely and chronically ill young girl with a small left eye with an external strabismus. Both pupils reacted to light. The left pupil was slightly irregular. There was some loss of hearing. (An E.E.N.T. consultant thought that both of these defects were congenital.) Examination of the lungs revealed some dullness in both bases with questionable moist rales heard over the left mid chest posteriorly. Blood pressure was 114/60; pulse 128. There was a harsh murmur to the left of the sternum in the second interspace. The murmur was transmitted to the left neck and slightly to the interscapular region. The murmur varied somewhat from time to time but usually was both systolic and diastolic and could be described as a continuous or machinery murmur. There was a precordial thrill. The heart was not enlarged and the rhythm was regular. Abdominal examination revealed tenderness over and below the left costal border and in the left flank. There was some slight suggestion on admission of cyanosis of the fingernail beds.

Laboratory work showed a hemoglobin of 9.86 gms., RBC 3.4 million, WBC 12,650, with a differential as follows: 8 stabs., 73 segs., 18 lymphs., 1 mono. Serology—negative. Blood cultures were taken. EKG was within normal limits. Admission chest plate is Figure 2.

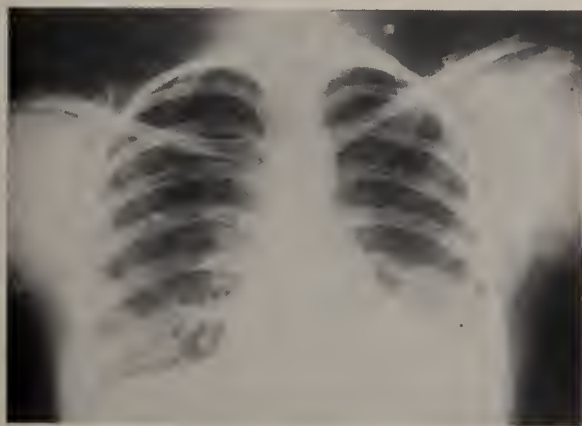


Fig. 2

#### COURSE IN HOSPITAL

The morning after admission the tachycardia had slowed to 90 and the murmur had a definite continuous character suggestive of patent ductus arteriosus. The blood cultures were showing an early

growth. Therefore, we made a provisional diagnosis of patent ductus arteriosus with subacute bacterial endocarditis. It was thought that the tenderness over the kidney and spleen and the migratory pneumonitis could be explained on the basis of septic infarcts. Five blood cultures, representing the period from 9/4/52 to 9/9/52, all grew diplococcus pneumoniae. This was checked by bile solubility tests, but the pneumococcus was not typed because typing serum is not available in our laboratory in this antibiotic era. The patient was placed on large doses of penicillin, and she became afebrile. Subsequent blood cultures were negative. On September 16, she had a temperature rise to 100.2 and complained of right anterior chest pain. This subsided, and on October 2, 1952, she was operated on. Numerous dense adhesions over the left upper and middle lobes made the operation difficult, but after careful dissection a patent ductus 1 cm. wide and 1.5 cm. in length was found. This was ligated with a purse string ligature at either end, and a heavy cotton ligature in between. The thrill disappeared immediately. The patient's post-operative course was stormy for the first week. She ran a very rapid pulse and a high temperature. There was consolidation in the left upper lobe and we thought at first an embolus had been thrown off at the time the ductus was ligated. Since the patient did not respond to antibiotics, she was bronchoscoped on October 10. Her temperature dropped abruptly to normal and spiked only slightly 24 hours later for the last time in her post-operative course. She was discharged much improved on 10/22/52. She occasionally has tachycardia when she is excited but her murmur has disappeared. She is taking a course in sewing at the Vocational Rehabilitation Center at Staunton and states that she feels better than she ever has in her life.

#### SUMMARY

1. Ninety-five per cent of the cases of patent ductus arteriosus can be diagnosed by physical examination alone. The most important sign is the murmur which is heard loudest in the second interspace to the left of the sternum and is a continuous machinery type of murmur.
2. Practically all diagnosed cases of patent ductus arteriosus should be operated on. The optimum age is from 4 to 20 years.
3. We have presented a case of patent ductus

arteriosus complicated by bacterial endocarditis; the infecting organism was diplococcus pneumoniae. The patient had numerous episodes that were interpreted as being due to septic infarcts.

## REFERENCES

- Gould, S. E.: Pathology of the Heart, P. 436-449, Charles C. Thomas, Illinois, 1953.  
Gross, R. E.: The Surgery of Infancy and Childhood, P.

806-827, W. B. Saunders Co., Philadelphia, 1953.

Johnson, Julian, and Kirby, C. K.: Surgery of the Chest, P. 302-309, Year Book Publishers, Inc., Chicago, 1952.

Lindskog, G. E., and Liebow, A. A.: Thoracic Surgery and Related Pathology, P. 446-451, Appleton Century Crofts, New York, 1953.

Scott, H. W.: Surgical Treatment of Patent Ductus Arteriosus in Childhood, Surgical Clinics of North America, P. 1299, October, 1952.

### Synthetic Opiate Proved Effective in Gastroscopy.

Meperidine hydrochloride, a synthetically produced opiate, has proved effective in facilitating examination of the interior of the stomach by means of a gastroscope, it was reported in a recent Journal of the American Medical Association.

Sedation and analgesia produced by use of the drug are superior to results obtained by other drugs, and its use eliminates the necessity of topical anesthesia and its possible hazards, it was stated by Drs. Paul J. Cimoch and C. Wilmer Wirts, Philadelphia.

In a gastroscopic examination, an instrument is passed through the mouth of the patient into the stomach. This procedure requires complete relaxation and cooperation on the part of the patient. To obtain this and eliminate any pain attached to the procedure, many combinations of drugs have been used.

The doctors described the intravenous administration of meperidine hydrochloride one to three min-

utes prior to gastroscopic examination of 256 patients. Relaxation and cooperation were obtained in the majority of cases. Of the examinations that were unsuccessful, most were the result of physical obstructions, the doctors said, adding:

"From our experience thus far, the administration of meperidine hydrochloride for gastroscopy has been found simple, and the resulting sedation and analgesia have been superior to the results we formerly obtained with morphine and atropine. In many patients, the effect was so striking that they appeared to be in a deep sleep but remained cooperative and responded to instruction.

"Because it is given immediately prior to examination, the drug permits the type, amount and time of administration of premedication to be controlled by the examiner. Furthermore, since it can be used as the only premedication, it eliminates the risk of topical anesthesia."

Some patients suffered such side-effects as dizziness, nausea and lightheadedness, but these reactions were "so minimal that they can be discounted," the doctors stated.

## CLINICAL PROBLEMS CREATED BY ANTIBIOTIC THERAPY\*

WILLIAM H. HARRIS, JR., M.D.,

McGuire Clinic,  
Richmond, Virginia

The extensive clinical application of antimicrobial drugs has revolutionized the management of infectious disease. During this triumphal antibiotic dominated era certain undesirable effects of our therapeutic enthusiasm have begun to appear. Occasionally we are startled to learn of a death or a prolonged illness attributed to some secondary antibiotic induced complication. For this reason it has seemed appropriate to review critically a few of the apparent causative factors.

## SUPERINFECTIONS

Profound changes take place in the bacterial flora of the human body during antibiotic therapy<sup>1,2</sup>. A sensitive microorganism to which treatment is being directed may be eliminated and a resistant bacterium of another species may appear. Such changes in most instances are unimportant. In certain individuals entirely new and unsuspected infections have been encountered which may seriously delay recovery.

The problem was first recognized in 1946 by Weinstein<sup>3,4</sup> who reported cases of pneumonia, bacteremia and pyelonephritis due to staphylococci in patients being treated with streptomycin for an original Hemophilus influenzae infection. Since then there have been numerous well documented reports<sup>5-11</sup> of secondary bacterial invasion caused by a variety of pyogenic bacteria which have occurred during the course of antibiotic therapy. Among the various regions of the body involved, the lungs, pleura, meninges, blood stream, and urinary tract have been most prominently mentioned. *Proteus vulgaris* and *Pseudomonas aeruginosa* appear to be the more common inciting agents, although several other species including *Staphylococcus aureus*, *H. influenzae*, *Klebsiella pneumoniae*, *B. coli*, and *Clostridia* have been implicated.

A comprehensive analysis of the evidence related to this problem has been undertaken by Tillet<sup>12</sup> whose investigation discloses that the bacterial species responsible for superinfections, with few exceptions, are not commonly considered as primary pathogens. The causative organism is usually present in enormous numbers and often in body areas not its usual

habitat. The patients in many instances are debilitated, elderly, malnourished, vitamin deficient, and may be suffering from an unrelated chronic disease process at the site of the secondary complication or elsewhere.

As for antibiotic induced mycoses it now appears that their importance has been somewhat exaggerated<sup>13</sup>. There is no convincing evidence that the overall incidence of fungus infection has increased. It is true that monilia multiply luxuriantly during therapy with antibiotics, especially the broad spectrum group, but no direct fungal growth stimulating property has been demonstrated. Mere increase in numbers, however, does not imply pathogenicity since *C. albicans* rarely causes systemic disease. Monilial involvement has been confined largely to oral, rectal or vaginal mucosa. Thrush is by far the commonest such complication and has been observed most often as a result of local application in the form of troches.

A few instances<sup>13,14,15</sup> of fatal disseminated systemic moniliasis have been reported. In these patients therapy had been prolonged, the majority suffered from some other chronic debilitating disease, and often multiple antibiotics had been used.

The mechanisms responsible for these new infections are not well understood. The following have been suggested: (1) Introduction of new bacteria from outside sources, such as carriers, contact with other infections, or incident to the administration of the antibiotic; (2) Insensitive organisms present in small numbers multiply and become invasive after susceptible strains are inhibited; (3) Rapid development of resistance by certain microbes following exposure to the antibiotic being prescribed, which then grow unchecked producing an additional infectious illness.

Those who have studied this problem do not consider the superinfection a serious hazard of therapy but admit that we should be particularly alert to its possible development in the elderly, those suffering from chronic disease, and when treatment has been prolonged.

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.



## BACTERIAL RESISTANCE

A serious complication of antibiotic administration has been the emergence of resistant microorganisms<sup>16</sup>. Certain bacteria have been found naturally resistant due to the production of a substance antagonistic to antibiotic activity. Others, though originally sensitive, may be able to adapt themselves to the hostile environment of the antimicrobial agent. In still another category are those individual cells which acquire resistance to the drug being administered through the process of spontaneous mutation.

Penicillin resistance has appeared almost exclusively in the staphylococcal species. During the period 1941 to 1946 ninety per cent of pathogenic strains of staphylococcus aureus were sensitive to one unit or less of penicillin *in vitro*. Between the years 1946 and 1949 a marked reduction in sensitivity was observed. In 1948<sup>17</sup> sixty per cent of strains of staphylococcus aureus isolated from hospitalized patients at the Mayo Clinic were found to be penicillin resistant. Repetition of sensitivity studies annually through 1951 has indicated the constancy of this figure.

During 1951 and 1952 investigators in Boston<sup>18</sup>, New York<sup>19</sup>, Seattle<sup>20</sup>, and Australia<sup>21</sup>, studying staphylococcal strains obtained from clinical infections, have reported substantial numbers insensitive to penicillin, varying from 31 to 43 per cent in New York to 75 per cent in Boston and Seattle. By far the majority were found to be producers of penicillinase.

Fortunately the hemolytic streptococcus, treponema pallidum, gonococcus, meningococcus, and pneumococcus have retained their sensitivity to penicillin, but most enterococci and many strains of streptococcus viridans, particularly those etiologic in subacute bacterial endocarditis, have become refractory<sup>6</sup>.

Not long after streptomycin became available for clinical use fast strains began to appear<sup>16</sup>. It was soon obvious that contact of most microorganisms with this antibiotic eventually led to their insensitivity to its antibacterial action. This has been well illustrated in the treatment of tuberculosis, where resistant tubercle bacilli present a major obstacle to successful management.

Streptomycin fastness may develop with great rapidity. Originally sensitive bacteria have been known to become resistant after 48 to 96 hours of exposure. Even more amazing is the observation that some bacteria already rendered resistant may

require streptomycin for continued growth<sup>22,23</sup>.

Both mutant and naturally resistant strains retain this characteristic indefinitely and thus comprise a large proportion of our present bacterial population. These hardy organisms probably account for the ineffectiveness of streptomycin in bacterial infections today which were formerly responsive to its administration.

Resistance to aureomycin, terramycin, and chloramphenicol has not yet become a major problem. It is alarming to note that Boston<sup>18</sup>, Rochester<sup>17</sup>, and Seattle<sup>20</sup> investigators report increasing numbers of staphylococci which have lost their sensitivity to these agents. It has also been possible to induce resistance to both gram positive and gram negative organisms experimentally<sup>6</sup>. Insensitivity to chloramphenicol has developed during the treatment of urinary tract infections caused by gram negative bacilli<sup>24</sup>. Naturally resistant bacteria have not been isolated nor has drug dependency been demonstrated as with streptomycin<sup>16</sup>. One important observation has been the tendency for these antibiotics to suppress the penicillinase mechanism, thus rendering resistant bacteria responsive to penicillin. This interesting phenomenon may be of considerable practical value should treatment with one or another of the broad spectrum drugs result in failure<sup>25</sup>.

## ANTIBIOTIC ANTAGONISM

Jawetz<sup>26</sup> and his colleagues have demonstrated conclusively that aureomycin, terramycin, and chloramphenicol can interfere with the action of penicillin, streptomycin, and bacitracin on certain microorganisms *in vitro* and *in vivo*. Rather exacting conditions have been found necessary to produce antagonism in the test tube and in the experimental animal. The interfering agent has to act before or simultaneously with the effective one. Results also indicate that antagonism is most pronounced when minimal amounts of the interfering antibiotics are used, and is prevented by an excessive concentration of either. For these reasons it has been considered unlikely that this problem would be encountered frequently in human infections. Tillett<sup>12</sup> has pointed out that the stringent conditions required for antagonism to take place experimentally could rarely be fulfilled in man since the absorption rate of each antibiotic differs and relative concentrations in the circulation and at the site of infection are in all likelihood constantly changing.

As predicted, the problem of antagonism has not been observed frequently in clinical practice. In a series of patients suffering from pneumococcal meningitis, reported by Lepper and Dowling<sup>27</sup>, the mortality was higher in those treated with a combination of penicillin and aureomycin than in a comparable group receiving penicillin alone. These authors conclude that penicillin and aureomycin are mutually antagonistic when administered concomitantly in this disease. No other proven instances of antagonism have thus far been reported in the literature and recoveries following treatment with combinations of penicillin and broad spectrum agents have been recorded<sup>10</sup>.

Opinion at this time tends to regard the development of antagonism as a rare complication of combined therapy, and therefore of no great significance in the management of human disease<sup>12</sup>.

The apparent rarity of antibiotic antagonism is no excuse for the indiscriminate use of combination therapy. In the great majority of bacterial infections a single antibiotic will suffice. No less an authority than Dr. Perrin Long, addressing the Medical Society of New York State on May 8, 1953, urged that the systemic use of multiple antibiotics be discontinued with the exception of penicillin and streptomycin in certain cases of resistant bacterial endocarditis.

#### COLITIS COMPLICATING ANTIBIOTIC THERAPY

In addition to the rather commonly observed anorectal irritation, diarrhea is a frequent complication of broad spectrum therapy. It may be the result of a mild simple colitis or of an extensive ulcerative process associated with the discharge of pus and blood. Between these two extremes bowel dysfunction varies in degree of severity. In some patients symptoms are prolonged and debility marked, even necessitating hospitalization. Chewning<sup>28</sup> has described in detail the proctoscopic appearance of the bowel in a large number of patients who had received aureomycin or terramycin by mouth. The changes consisted of erythema and edema in some cases, a mottled, friable, easily bleeding mucosa in others, and multiple ulcerations covered with pus, mucus, and blood in those with most severe involvement. No specific pathogens could be isolated from the excreta in any of these patients. Although complete recovery took place in all instances, no treatment proved consistently beneficial.

A few fatal cases of severe pseudomembranous enterocolitis occurring in patients under treatment with aureomycin and chloramphenicol have been reported by Reiner, Schlesinger, and Miller<sup>29</sup>. A causative agent could not be recovered from the intestinal contents of these cases and the authors were of the opinion that the antibiotics were responsible. A recent study<sup>30</sup> of the available evidence has revealed that pseudomembranous enterocolitis is a distinct clinical entity which usually follows intestinal surgery, but proof that the condition is precipitated or aggravated when present by antibiotic therapy has not been established. The syndrome had been known to occur long before the antimicrobial era.

A severe, sometimes fatal, illness<sup>31,32,33</sup>, caused by resistant staphylococci, has been observed in this country and abroad during the past year. Terramycin had been used in the majority of these patients, although a few had received aureomycin and a small number penicillin and streptomycin. For the most part these drugs had been prescribed as prophylactic agents pre-operatively and during surgical procedures. The condition has been classified as an enterotoxemia because of the "cholera-like" syndrome observed. Despite conflicting statements in the literature, apparently no true enterotoxin has been demonstrated. Symptoms have consisted of copious watery diarrhea and fever. Shock, oliguria, and uremia have been terminal manifestations. The distinguishing feature is the predominance of staphylococci on examination of the liquid stools. Blood cultures have been sterile and death is considered to result from toxemia rather than septicemia.

Unexplained fever associated with diarrhea in any patient under antibiotic therapy should suggest the onset of staphylococcal enteritis. Immediate discontinuance of the agent being used and the institution of intensive supportive therapy are measures necessary to insure a successful outcome. In some instances elimination of staphylococci from the intestinal tract has been achieved by the administration of erythromycin, and to date it has been the most effective chemo-therapeutic weapon in combating this complication.

#### PENICILLIN ANAPHYLAXIS

Reports of immediate anaphylactic shock following the administration of penicillin have appeared with increasing frequency. In the several papers<sup>34-39</sup> reviewed, we have found reference to 61 such reac-

tions, 23 of which proved fatal. The number of individuals who become sensitized to penicillin increases daily. Is there any reason why we should not expect a greater incidence of anaphylaxis in the future?

The intramuscular administration of penicillin in its various forms has been most often responsible for these reactions. However, sinus instillation, aerosolization, dust inhalation, intradermal injection and oral ingestion have been implicated in severe anaphylactic states.

The reaction itself comes on suddenly, in seconds to minutes after administration of the antibiotic. Shock accompanied by cyanosis and labored, slow breathing is the most common sign, while convulsions occur in many and unconsciousness in most instances. Fatalities have been recorded minutes to several hours after onset of symptoms.

Most of these reactions have occurred in persons to whom penicillin had been administered previously without incident. A few patients have reacted following the initial dose. Among the 61 cases already cited, many had an allergic background, asthma being especially common. It is obvious, therefore, that one should be extremely cautious about prescribing penicillin for such individuals. The simple procedure of skin testing may be very informative as to the patient's allergenicity and is recommended when circumstances warrant.

Inquiry should always be made as to earlier reactions. When penicillin has produced anaphylactic shock on a previous occasion, dire consequences may result from its subsequent administration. Inadvertent intravenous injection should be strenuously avoided by routine pullback on the syringe plunger before each dose. Only by attention to these important aspects of therapy can we hope to prevent serious immediate reactions.

#### CONCLUSION

Certain problems related to antibiotic usage have been discussed. It is impossible to predict how far reaching the impact of today's global antibiotic therapy will be on our future microbial population. An ominous note is sounded by Garrod, a British investigator, in the following statement: "Bacteria are displaying some versatility in their response to chemo-therapeutic drugs. They are not taking the present widespread attack on them lying down; some

are defending themselves very effectively, and some are even turning our weapons to their own advantage. So far the supply of new antibiotics has more than matched the capacity of bacteria to resist them, but if this supply should cease—and presumably the number yet to be discovered is limited—the time may come when a few of the more enterprising species will flourish more or less unhindered." No one should be denied the benefit of these valuable agents when there is a definite indication for their use, but, by all means, let us exercise discrimination in case selection.

#### BIBLIOGRAPHY

1. Keefer, C. S.: *Am. J. Med.*, **XI**: 665, 1951.
2. Smith, D. T.: *Ann. Int. Med.*, **37**: 1135, 1952.
3. Weinstein, L.: *New England J. Med.*, **235**: 101, 1946.
4. Weinstein, L.: *Am. J. Med. Sc.*, **214**: 56, 1947.
5. Appelbaum, E., and Leff, W. A.: *J.A.M.A.*, **138**: 119, 1948.
6. Editorial: *Ann. Int. Med.*, **36**: 196, 1952.
7. Finland, M., and Weinstein, L.: *New England J. Med.*, **248**: 220, 1953.
8. Barach, A. L., Bickerman, H. A., and Beck, G. J.: *Arch. Int. Med.*, **90**: 808, 1952.
9. Yow, E. M.: *J.A.M.A.*, **149**: 1184, 1952.
10. Ahern, J. J., and Kirby, W. M. M.: *Arch. Int. Med.*, **91**: 197, 1953.
11. Jackson, G. G., *et al.*: *Ann. Int. Med.*, **35**: 1175, 1951.
12. Tillett, W. S.: *Ann. Rev. Med.*, **4**: 1, 1953.
13. Kligman, A. M.: *J.A.M.A.*, **149**: 979, 1952.
14. Brown, C., Propp, S., Guest, C. M., Beebe, R. T., and Early, L.: *J.A.M.A.*, **152**: 206, 1953.
15. Zimmerman, L. E.: *Arch. Path.*, **50**: 591, 1950.
16. Long, P. H.: *Bull. New York Acad. Med.*, **28**: 809, 1952.
17. Needham, G. M., and Nichols, D. R.: *J. Lab. and Clin. Med.*, **41**: 150, 1953.
18. Finland, M., and Haight, T. H.: *Arch. Int. Med.*, **91**: 143, 1953.
19. Meleney, F. L., and Johnson, B. H.: *Surg., Gynec. & Obst.*, **97**: 267, 1953.
20. Haviland, J. W.: *Ann. Int. Med.*, **39**: 307, 1953.
21. Rountree, P. M., and Thomson, E. F.: *Lancet*, **2**: 262, 1952.
22. Miller, C. P., and Bohnhoff, M.: *Science*, **105**: 620, 1947.
23. Miller, C. P., and Bohnhoff, M.: *J. Bact.*, **54**: 467, 1947.
24. Garrod, L. P.: *Brit. M.J.*, **1**: 205, 1951.
25. Monnier, J. J., and Schoenbach, E. B.: *Antibiotics and Chemother.*, **1**: 472, 1951.
26. Jawetz, E.: *Arch. Int. Med.*, **90**: 301, 1952.
27. Lepper, M. H., and Dowling, H. F.: *Arch. Int. Med.*, **88**: 489, 1951.
28. Chewning, C. C., Jr.: *Virginia Med. Month.*, **79**: 136, 1952.



29. Reiner, L., Schlesinger, M. J., and Miller, G. M.: Arch. Path., **54**: 39, 1952.
  30. Editorial: New England J. Med., **249**: 37, 1953.
  31. Dearing, W. H., and Heilman, F. R.: Proc. Staff Meet., Mayo Clin., **28**: 121, 1953.
  32. Sloss, P. T.: Minnesota Med., **36**: 63, 1953.
  33. Fairlie, C. W., and Kendall, R. E.: J.A.M.A., **153**: 90, 1953.
  34. Stroud, G. M.: Arch. Dermat. Syph., **66**: 491, 1952.
  35. Higgins, G. A., and Rothchild, T. P. E.: New England J. Med., **247**: 644, 1952.
  36. Siegal, S., Steinhardt, R. W., and Gerber, R.: J. Allergy, **24**: 1, 1953.
  37. Mayer, P. S., Mosko, M. M., Schutz, P. J., Osterman, F. A., Steen, L. H., and Baker, L. A.: J.A.M.A., **151**: 351, 1953.
  38. Council on Pharmacy and Chemistry: J.A.M.A., **151**: 1105, 1953.
  39. Feinberg, S. M., Feinberg, A. R., and Moran, C. F.: J.A.M.A., **152**: 114, 1953.
- 1000 West Grace Street.*

### Discovery of New Factor in Blood.

An unusual reaction to a blood transfusion that led to the discovery of a new, common factor in the blood, designated as factor U, was described in the December 19 Journal of the American Medical Association. Lack of the factor, noted in Negroes, causes the blood to clump, complicating blood transfusions.

The reaction occurred in a 35-year-old Negro woman who was admitted to a New York hospital suffering from a bleeding peptic ulcer and anemia. A blood transfusion was attempted upon admittance, but discontinued when the patient suffered chills and fever. A week later a second transfusion was attempted; despite all precautionary measures, the patients went into shock and died.

Tests of the patient's blood and that of the donors

indicated that the patient's serum contained an abnormal antibody that caused the blood cells of the donors to clump together upon transfusion, the article stated. Further tests with the patient's serum on a small series of other blood specimens showed them all to be incompatible with the patient's. This indicated the factor in question had a high frequency in the population and apparently was not related to any known factor, it was added. The patient lacked this factor, which was named factor U.

Additional tests in order to find persons lacking in the factor were made on 690 Caucasoids and 425 Negroids. All of the Caucasoids were found to have factor U in their blood, while four of the Negroids tested were found to be lacking in it.

The report was made by Dr. A. S. Wiener, Dr. L. J. Unger and E. B. Gordon, Brooklyn.

## LEUCONYCHIA TOTALIS\*

CARL S. LINGAMFELTER, M.D.,†  
Richmond, Virginia

and  
CHARLES W. WHITMORE, M.D.,  
Charlottesville, Virginia

Leuconychia involving the nail plate in the form of white dots, streaks or bands of various sizes is a common condition. It usually begins near the lunula and gradually progresses toward the free border with the growth of the nail. The condition is found chiefly in young persons and principally on the nails of the fingers. At times only one nail is involved, but in other instances all may be the seat of numerous white spots or white bars.

In contrast to the frequency of the above type of leuconychia, there is a curious form of the disorder known as leuconychia totalis which is distinctly uncommon. In this variety, as the name implies, the entire nail plate is white. The nails of leuconychia totalis are of cosmetic importance only.

A case of leuconychia totalis recently seen in the Dermatology Department of the University of Virginia Hospital is illustrated in this report. The patient was a 40 year old white male with involvement of all the nails of both hands and feet. He stated that the condition had been present since birth and was completely asymptomatic. Examination

showed that all nails were porcelain white in color and that the lunulas could not be made out (Figs. 1 and 2). In addition, there were typical lesions of



Fig. 2. Nails of the patient with leukonychia contrasted with normal nails. (Ring on finger of individual with normal nails).

psoriasis on both hands and wrists as well as on the elbows, knees and buttocks. The psoriasis had first appeared at the age of 27 years. The physical examination was otherwise normal. There was no family history of leuconychia.

The pathogenesis of leuconychia in general is not understood although numerous theories<sup>1,2,3</sup> have been advanced to explain the condition. Only a few instances of leuconychia totalis similar to the case described here have been recorded in the literature. Four of the previously reported cases have been on an hereditary basis. Our case may be classified as congenital, since we were unable to demonstrate a familial distribution.

## REFERENCES

1. Woolf, M. S.: Leukonychia Striata. *Arch. Dermat. & Syph.*, **12**:520, (Oct.) 1925.
2. Singer, P. L.: Leukonychia—Its Normal Occurrence and Causation. *Arch. Dermat. & Syph.*, **24**:113 (July) 1931.
3. Kruse, W. T., Cawley, E. P. and Cotterman, C. W.: Hereditary Leukonychia Totalis. *J. Invest. Dermat.*, **17**:135 (Sept.) 1951.



Fig. 1. Nails of the patient reported here, showing porcelain white appearance and absence of the lunulas.

\*From the Department of Dermatology and Syphilology, University of Virginia Medical School, Charlottesville, Virginia.

†1805 Monument Avenue, Richmond, Virginia.

## A GENERAL HOSPITAL ADMISSION X-RAY PROGRAM\*

ALFRED L. KRUGER, M.D.,

PHILIP B. PARSONS, M.D.,

and

JOE LEE FRANK, JR., M.D.,

Norfolk, Virginia

Although it has been realized for many years by physicians that pulmonary disease of varied etiology could occur asymptotically, the importance of chest x-rays as a part of routine physical examinations was not fully appreciated by physicians until World War II. The primary object of pre-induction chest x-rays in that war was to eliminate all cases of tuberculosis from entering military service. Approximately one-half of all cases of significant tuberculosis have no symptoms or symptoms so slight as to escape notice. It is well known that pulmonary disease may exist with the physical examination being entirely normal even at the hands of an expert. It is, therefore, not surprising that over one per cent of pre-induction chest x-rays showed active tuberculosis.

Mass surveys for the detection of tuberculosis were conducted on a small scale in different sections of the country prior to World War II. With the knowledge gained by the results of the pre-induction x-ray program, such surveys were begun on a larger scale after the conclusion of the war. Crimm<sup>1</sup> reviewed the results of fifteen such surveys and found that active reinfection tuberculosis was found in the range of 0.3 cases to 3.01 cases per 1000 films.

More recently, attention has been directed to the detection of other forms of pathology in the mass x-ray surveys. Cardio-vascular abnormalities, bronchiectasis, cystic disease of the lung, lymphomas and bronchogenic carcinomas have been found in asymptomatic individuals. Realizing that carcinoma when found in the symptomatic phase is usually an inoperable carcinoma, the importance of finding it in the asymptomatic phase through routine chest x-ray examination cannot be over-emphasized.

The difficulty with a mass x-ray survey is that it is extremely difficult to get the older people to participate. One should recall that it is among the older people, especially males, that tuberculosis and cancer of the lungs are most frequently found.

Schneider and Robins<sup>2</sup> found in their survey that the prevalence rate of tuberculosis was appreciably higher for veterans fifty years of age or over.

Early interest in tuberculosis case-finding in general hospitals was aroused as a result of programs in hospitals where tuberculin tests and chest x-rays were made on student nurses. It was found that a large percentage of those students who entered their careers as non-reactors had become positive tuberculin reactors shortly after beginning to work on patients, even in hospitals that did not knowingly admit tuberculous patients. The hesitancy in adopting such a program was chiefly due to the fact that the use of large films was costly not only in money, but in time and in the lack of adequate facilities. Fluoroscopy was tried in some hospitals and in the hands of expert clinicians it was recognized as a valuable diagnostic aid, but it failed to supply an objective record of the findings. The development of the small photofluorograph in the late 1930's made possible the examination of a large number of persons quickly, easily and at relatively low cost.

Plunkett,<sup>3</sup> in 1940, conducted chest x-ray examinations of 4,853 patients admitted to general hospitals in up-state New York and found 2.6 per cent with evidence of reinfection tuberculosis, of whom 1.1 per cent had active lesions. Childress<sup>4</sup> reported a survey conducted at Grasslands Hospital in New York City. In that study, 7,187 admissions were x-rayed and 2.8 per cent showed evidence of tuberculosis of whom 0.6 per cent had active disease. Schneider and Robins<sup>2</sup> conducted an extensive survey of admissions to Veterans Hospitals and reported on 1,091,708 patients x-rayed. They found that the yield of unsuspected active tuberculosis was at least four times that derived from community-wide x-ray surveys. It is estimated that approximately 16 million persons are admitted to general hospitals each year. Oatway,<sup>5</sup> in 1948, conducted a survey to find out what proportion of general hospitals in the United States had programs of routine chest x-ray for patients on admission. He found that, at that time, only 247 of the 4,539 general hospitals in the

\*From the Departments of Medicine and Radiology of Norfolk General Hospital.

Presented before the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953.



country had programs in action. It was, therefore much to the point that on June 9, 1952, at a joint meeting of committees from the American College of Radiology and the American College of Physicians, an official endorsement of routine chest x-rays for all hospital admissions was made.

It must be emphasized that the small film radiographic examination is but a screening procedure serving to separate persons with definite or suspicious abnormal shadows from those with no chest abnormality. An abnormal finding in the initial film cannot by itself constitute a clinical diagnosis. It merely serves to focus attention on the need for further study and imposes an obligation on the physician to carry out a full diagnostic survey promptly in order to determine the clinical significance of the suspected abnormality. Birkelo<sup>6</sup> made an analysis of the different x-ray modalities and concluded that, strictly from the point of view of *detecting* pathology, none of the different techniques, not even the 14" x 17" film, is superior to any of the others.

In November, 1947, a 70 mm. photofluorograph was installed in Norfolk General Hospital. The purpose in installing this unit was four-fold:

1. To x-ray every admission to the hospital when possible. (In readmissions the study is not repeated at less than six months.)
2. To x-ray every new clinic patient. (O.P.D.)
3. To x-ray all hospital personnel every six months.
4. To encourage practicing physicians in the city to send their patients for a routine chest x-ray whenever they desire.

The unit was installed in a room close to the admission office so that all ambulatory admissions could have the x-ray taken on their way to their rooms. Those that were admitted after 6:00 P.M., were sent for the following day by the technician who received a daily list of admissions to the hospital. All of the x-rays are read daily around 4 o'clock P.M., and reports of the findings are incorporated with the patient's hospital record. Whenever any abnormality is found, a request is made on the report to the attending physician to return the patient to the department for a 14" x 17" film or other x-ray studies, as indicated. Of 43,967 films studied, approximately 74.5 per cent were negative, 14.5 per cent showed significant cardiovascular abnormalities, 2.86 per cent revealed suspected reinfection

tuberculosis, and 5.9 per cent showed other pulmonary lesions (Table I).

TABLE I  
INCIDENCE OF PATHOLOGICAL READINGS

	Absolute Numbers	Per cent
1. Essentially Negative -----	32,740	74.48*
2. Cardiac Enlargement -----	1,651	3.78
3. Wide Aorta -----	4,716	10.70
4. Suspect Reinfection Tuberculosis	1,257	2.86
5. Other Pulmonary Lesions -----	2,632	5.97
6. Other Heart Lesions -----	281	0.64
7. Other Lesions, Miscellaneous	210	0.48
8. Bony Lesions -----	480	1.09
	43,967	100%

Total Photofluorographic Readings, June 1,

1949 - September 26, 1953 ----- 43,967

\*This figure is approximate since several patients had more than one pathological finding.

It must be emphasized that not every admission to a general hospital will get a film on admission. Those admitted in a critical state, those admitted as a result of severe injuries, those admitted in active labor will not be able to have the admission x-ray made. Most of these patients, however, will be able to have the x-ray taken prior to discharge. Infants and young children are not suitable candidates for photofluorography. Besides the chances of their showing any tuberculous lesion is very remote. Of 4,059 Philadelphia primary school children surveyed in 1946, only 0.3 per cent were possibly tuberculous, and none were found to have active disease.

We have made a conscientious effort to examine as many of the admissions as possible but, because of the above stated exceptions, the actual number of admission x-rays taken has fallen short of 100% by a considerable margin. Ochsner<sup>7</sup> found that 39 per cent of admissions were not x-rayed and the group included the traumatic, the children tonsillectomies and obstetrical cases. This did not include the medical and surgical emergency admissions which would add a significant additional percentage of patients not x-rayed on admission.

No attempt has been made in this presentation to give the follow-up studies done on these patients to determine the final diagnosis made. We are completely convinced of the fruitfulness of this examination in detecting unsuspected chest pathology. This procedure has met with widespread approval by the physicians of Norfolk who have become

impressed with the importance of this examination (Table 2). That the program has been successful can be shown by the recent installation of photofluorographic equipment for a similar purpose in the

TABLE II  
DISTRIBUTION OF SOURCES REFERRING  
FOR PHOTOFUOROGRAPHIC STUDIES

	Absolute Number	Percentage
In Patients (Private & Clinic) ---	22,423	51
Out Patients (Private) -----	5,716	13
Out Patients (Clinic) -----	7,474	17
Out Patients (Courtesy —98% Personnel) -----	8,354	19
	43,967	100%

other two general hospitals in Norfolk. Where such equipment is installed in a general hospital, existing space and personnel can be used. Not only is the program of importance in discovering the "hidden" case of tuberculosis but it also provides protection for other patients and hospital personnel from unsuspected sources of infection. One may hear criticism as to the value of any survey for the detection of tuberculosis, in the light of long waiting-lists for beds at the tuberculosis sanatoria. While it is shocking and there is complacency about infectious tuberculosis and while the pleas for more sanatoria frequently fall on deaf ears, there is great virtue in knowing the extent of the problem. The average citizen who finds that he has a positive sputum is willing to protect his contacts and to limit his own activities for the betterment of his health.

CONCLUSIONS

1. Chest x-rays of all possible hospital admissions should be a part of the routine admission diagnostic study.
2. Photofluorography, irrespective of the method, constitutes an excellent screening procedure.
3. By this method, potentially serious pulmonary diseases may be detected in their asymptomatic phase; then therapy, properly and promptly instituted, may be curative.
4. The detection and prompt isolation of cases of tuberculosis on admission to a hospital will do much to prevent the spread of the disease to others.

BIBLIOGRAPHY

1. Crimm, P. D.: Evaluation of a Five Year Minifilm Program. *Am. J. of Roent. Rad. Ther. & Nuc. Med.* **68**: 240-246, 1952.
2. Schneider, L. V., and Robins, M.: Tuberculosis Case Finding Survey Program of the Veterans Administration. *Public Health Reports.* **67**: 189-195, February, 1952.
3. Plunkett, R. E., and Mikol, E. X.: Unrecognized Tuberculosis in General Hospitals, *Am. Rev. Tbc.* **41**: 381-387. 1940.
4. Childress, W. G., Debbil, A. G., and Harmon, E. L.: T.B. Case Finding by General Hospitals, *J.A.M.A.* **122**: 1063-1065, 1943.
5. Oatway, W. H., Jr.: The Current Status of Routine X-raying in General Hospitals of the U. S., *Arizona Med.* **6**: 23, 1949.
6. Birkelo, C. C., *et als.*: A Comparison of the Effectiveness of Various Roentgenographic and Photofluorographic Methods, *J.A.M.A.* **133**: 359-365, 1947.
7. Ochsner, H. C.: The Chest Survey in a Large General Hospital, *Dis. Chest.* **19**: 444-453, April, 1951.

## GUILLAIN-BARRE SYNDROME: REPORT OF A CASE IN PREGNANCY AND A REVIEW OF THE LITERATURE\*

H. S. ZFASS, M.D.,  
I. S. ZFASS, M.D.,  
C. E. TROLAND, M.D.,  
and  
T. R. MACK, M.D.,  
Richmond, Virginia

Guillain, Barre and Strohl<sup>1</sup>, in 1916, described a syndrome resulting from an inflammatory process in the brain, spinal cord, posterior roots and peripheral nerves. Although Osler<sup>2</sup>, in 1892, described the first case under the name of "acute febrile polyneuritis", the clinical picture remained vague until this trio emphasized the characteristic albumino-cytologic dissociation in the spinal fluid, the preponderance of motor weakness over sensory disturbances, and the favorable prognosis despite the initial serious appearance. However, in 1918, Bradford, Bashford and Wilson<sup>3</sup>, in England, and the following year Cassamajor<sup>4</sup>, in America, found a mortality rate of approximately 25%. Since 1936 other reliable sources<sup>5,6,7</sup> have reported mortality rates ranging from 20 to 40%. The discrepancy of these figures with those of Guillain and Barre probably lies in the coincidental occurrence of acute phases of the disease in the higher mortality group as compared with the probable benign nature in the Guillain-Barre group. The localization of the lesion may be an index to the prognosis, the outlook being much more serious when the bulbar or upper cord areas are involved than in the localization of the disease in the lower cord or peripheral nerves.

This syndrome has been called by various names according to the topography and degree of nervous system involved, e.g., infectious polyneuritis, infectious neuronitis, radiculitis, myelitis of undetermined origin, acute ascending myelitis, myeloradiculitis, encephalomyeloradiculitis and acute febrile neuritis. It has been reported precipitated by measles, mumps, scarlet fever, syphilis, varicella, tuberculosis, infectious hepatitis, infectious mononucleosis, botulism, bronchogenic carcinoma, serum sickness, upper respiratory infections, sulfonamides, and trauma.

The etiology of the Guillain-Barre syndrome has not been settled but a filtrable virus and probably a rather strict neurotrope<sup>8</sup> was considered the most likely agent. The pathologic findings, although not

specific, were also found to be in keeping with the changes noted in the nervous system following filtrable virus infections. However, Nielsen<sup>9</sup>, in a recent brilliant monograph, concluded that the Guillain-Barre syndrome was not an entity etiologically, clinically, pathologically nor therapeutically. In ten proven cases treated with British Anti-Lewisite, nine showed definite improvement. Although the author hastened to add that his work was still in the experimental stage and that there were many unknown facts in this syndrome, the symptom complex was considered to be basically a manifestation of a toxic interference with enzyme metabolism of ganglion cells and that this could be aided with BAL. The problem of selective albumino-cytologic dissociation has never been adequately explained. Hassin<sup>10,11</sup> demonstrated the absorption of spinal fluid through the perineural spaces of the cranial nerves and spinal nerve roots and not, as formerly believed, through the villi or pacchionian bodies. Reitman and Rothschild<sup>12</sup> suggest that when these spaces are obliterated by malignant metastasis, inflammatory reaction or allergic edema, there is a resultant obstruction to the perineural circulation of the cerebrospinal fluid as the nerve roots emerge from the cord, thus permitting absorption of fluid and electrolytes but preventing the absorption of the larger protein molecules. A common anatomic basis, regardless of the etiology, is thus suggested.

The differential diagnosis must include poliomyelitis and diphtheria. Approximately ten per cent of diphtheritic cases develop polyneuritic or other neurological manifestations. Diphtheritic polyneuritis may simulate a Guillain-Barre syndrome to such an extent that a definite diagnosis can be difficult. History of contact and nose and throat cultures are helpful. Delp *et al.*<sup>13</sup> reported five cases of post-diphtheritic polyneuritis where the characteristic albumino-cytologic dissociation was present in each and the diagnosis established by isolation of *C. diphtheriae* from a cutaneous ulcer. The paralysis

\*Presented at the Scientific Meeting of the McGuire Clinic, Richmond, October 7, 1952.



of poliomyelitis is usually unilateral as compared to the bilaterally symmetrical paralysis of the Guillain-Barre syndrome. There are spasms but no sensory changes in the former, and cranial nerve involvement is rare. There is also a seasonal difference, the Guillain-Barre syndrome usually occurring in the colder months of the year. Perhaps the differential diagnosis should also include toxic porphyria, a uniformly fatal disease. Typical albumino-cytologic dissociations have been found in the spinal fluid of cases of porphyria<sup>9</sup>. This condition and the Guillain-Barre syndrome have, on occasions, coexisted. Occasionally coproporphyrin is intermittently excreted in the urine as porphobilinogen, a colorless compound which upon exposure to sunlight or filtered ultraviolet rays results in shades varying from a pink fluorescence to dark brown or Port wine. Since it is obvious that this test will not always be positive for the presence of porphyrin in the urine and yet porphyria still be existent, it is conceivable that a patient can be treated for a non-porphyrin Guillain-Barre syndrome and die from an unsuspected porphyrin polyneuritis. Toxic porphyria can be precipitated by an attack of poliomyelitis, by ingestion of morphine, barbiturates, some coal tar products, and by anesthetics. The final diagnosis of porphyrinuria is made on the identification of the characteristic spectral absorption bands of alkaline porphyrin at 6220, 5760, 5390 and 5040 angstroms.

MacNeal and Bland<sup>8</sup> recently reviewed the literature in regard to the Guillain-Barre syndrome. It is within the scope of this paper to review only the incidences in which this syndrome has occurred in pregnancy. McGooan<sup>14</sup> reported fifteen cases of severe polyneuritis in pregnancy due to vitamin B deficiency with slow ultimate recovery with adequate dosages of thiamin chloride daily. Spinal fluid determinations were not made in any of these cases. Berkwitz and Lufkin<sup>15</sup> reviewed five hundred cases and reported four cases of toxic neuronitis of pregnancy; there was one survival and the spinal fluid determinations in each were reported negative. At autopsy the characteristic lesions were degenerative changes of the peripheral nerves and anterior horn cells and petechial hemorrhages in the brain and cord. Posner and Hecht<sup>16</sup> reported a case of gestational neuronitis and attributed the onset to vitamin B deficiency; a spinal fluid examination was not made. Similarly, Agnew<sup>17</sup> reported a case of gestational neuronitis, without spinal fluid determination,

and stressed the importance of large dosages of vitamin B in its treatment. Finally, Rowan and Mayfield<sup>18</sup> reported a case of severe fulminating type of peripheral radiculoneuritis complicating pregnancy that was relieved following a Caesarean section. The authors differentiated this from a Guillain-Barre syndrome because of the lack of sensory findings and the gradual onset of the case in question. A spinal fluid determination was not done.

The case to be presented is interesting in that it represents a rare instance of the Guillain-Barre syndrome complicating pregnancy.

#### CASE REPORT

A 17-year old white married female was doing well with a three months' pregnancy until four days prior to her first admission to the hospital when she complained of onset of weakness in both lower extremities and suddenly collapsed while walking. The following day she became troubled with nausea and vomiting which persisted until the day of admission. On the day of entry she noted some stiffness of the right side of the face. The general physical examination at this time was not remarkable with the exception of the neurological findings; these revealed well outlined optic discs, an almost complete right peripheral facial paralysis with other cranial nerves intact. There was marked weakness of both legs with absent reflexes in all extremities. Temperature 99.4°, pulse 120, respirations 32. A Guillain-Barre was suspected and a lumbar puncture revealed a cell count of three, with protein 180, chlorides 759, and sugar 63 mgs. per 100 cc. Other routine laboratory studies were non-contributory. With the exception of one episode of a slight choking sensation and a mild headache, her hospital stay was uneventful and she was discharged in an apparent improved condition eleven days following admission.

The patient was admitted to the hospital twenty-four hours later because of an acute respiratory episode characterized by dyspnea, cyanosis and inability to swallow without strangulation. Patient appeared apprehensive, acutely ill, and unable to talk above a whisper. Temperature was 101.8°, pulse 140, and respirations 40. The pupils were equal and regular and reacted sluggishly to light and accommodation. The sclerae were clear. Ophthalmoscopic examination revealed normal retinal vessels and discs. Ears and nose were negative. The tongue was in the mid-line; the vocal cords did not approximate. A

facial diplegia was obvious. There was no cervical adenitis or thyroid enlargement. With the exception of decreased breath sounds in the left upper lobe the lungs were resonant throughout. The chest walls expanded equally but not fully. Cardiac dullness was within normal limits, rhythm regular, rate 140 per minute at apex,  $A_2 = P_2$ . Blood pressure 124/88 bilaterally. The blood vessels evidenced no pathological processes. The breasts were negative. Abdomen negative. Pelvic examination revealed the uterus to be enlarged to the size of a three months' pregnancy; the adnexae, clear. There was slight oozing of bright red blood from the cervical canal. A neurological examination revealed the following pertinent findings: partial vocal cord paralysis, bilateral facial weakness, respiratory weakness, absent deep tendon reflexes of all extremities and absent vibratory sense in both legs. The skin was clammy. There was no lymphadenopathy. Admission blood studies by the week-end interne revealed the hemoglobin to be 90 per cent, with a WBC of 22,600 and a differential of 84 per cent polymorphonuclears and 16 per cent lymphocytes. Forty-eight hours later the hemoglobin was 77 per cent, WBC 8,200 with 80 per cent polymorphonuclears and 20 per cent lymphocytes. Blood chemistry studies were non-contributory including a blood urea of 24 mg. per 100 cc. and a fasting blood sugar of 74 mg. per 100 cc. Throat cultures for diphtheria and Schick tests were reported negative. Exposure of urine specimen to sunlight did not reveal the presence of porphyrin. The initial impression of a Guillain-Barre syndrome became rather obvious on the basis of increasing spinal fluid proteins of 180, 300 and 440 mg. per 100 cc. and an absence of pleocytosis during a period of ten days. A spinal fluid specimen, on the last occasion, was also sent to the National Institute of Health where it was reported negative in mice for virus isolation. Nausea, epigastric discomfort and joint discomfort persisted, and further questioning revealed the startling admission that the patient had been existing on a diet consisting only of potatoes and occasional eggs for approximately one month prior to admission. She attributed this dietary deficiency to an unsympathetic husband and poor economic circumstances. The polyneuritis and nausea responded dramatically to large dosages of vitamin B complex and there was gradual but definite improvement of the remaining neurological manifestations following antibiotics and

physiotherapy. On the 28th hospital day, the day of discharge, vibratory sensibility was still absent in both lower extremities and patient could support herself only in the sitting position.

Her convalescence was uneventful, the ability to walk occurring six weeks following her discharge from the hospital. She was observed in the office at monthly intervals, and by the third month the neurological findings had disappeared and her pregnancy was progressing without incident. An electroencephalogram was essentially negative. Other laboratory findings revealed a hemoglobin of 11.8 grams with a normal white count and differential. The spinal fluid was clear and colorless with a normal Pandy, cell count of one, and a total protein of 37 mgm. per 100 cc. There were no further complications and at term a viable infant was delivered without difficulty.

#### DISCUSSION

The occurrence of a proven case of Guillain-Barre syndrome complicating pregnancy has not, to our knowledge, been reported in the literature. A general review of the literature and especially in regard to the incidence of this syndrome in pregnancy revealed many cases of polyneuritides, motor weakness and other symptoms resembling a Guillain-Barre. However, none of the cases satisfied the diagnostic criteria. The case presented herein is unique because it is a classical example of the Guillain-Barre syndrome complicating pregnancy. BAL therapy was considered in the light of Nielsen's favorable report but the patient's response to the initial conservative measures was so satisfactory that this was not attempted. This patient's dramatic history of dietary deficiency coincidental with the onset of the syndrome posed the possibility of a neuronitis of two sources.

The etiology of the Guillain-Barre syndrome is questionable and further work with BAL may confirm Nielsen's conclusion that the syndrome is not an entity etiologically, clinically, pathologically or therapeutically. Until this report a filtrable virus, probably a strict neurotrope, has been favored. Although there are no specific pathologic findings, the changes noted in the nervous system are, in a general way, in keeping with those following filtrable virus infections. The most recent concept favors the syndrome to be basically a manifestation of a toxic interference with enzyme metabolism of ganglion cells and it is therefore conceivable, in view of

the rarity of this syndrome in gestation, that the physiology of pregnancy in some way protects the physiological processes of the ganglion cells. It seems reasonable to accept the explanation of the albumino-cytologic dissociation on the basis of an obstruction to the perineural circulation of the cerebrospinal fluid as the nerve roots emerge from the cord. This basic pathologic process thus permits absorption of fluid and electrolytes but prevents the absorption of the larger protein molecules.

The syndrome may be precipitated by a host of conditions and the differential diagnosis must include diphtheria, poliomyelitis and prophyria.

#### SUMMARY

1. The literature has been reviewed with specific emphasis on the occurrence of the Guillain-Barre syndrome in pregnancy.
2. A classical case of the Guillain-Barre syndrome complicating pregnancy has been presented and, to our knowledge, is the first case to be reported in the literature.
3. The etiology, pathology, physiology, differential diagnoses and treatment of the syndrome have been discussed.

2502 Monument Ave. (Dr. H. S. Zfass)

#### BIBLIOGRAPHY

1. Guillain, G., Barre, J. A., and Strohl, A.: Sur un Syndrome de Radiculoneurite avec Hyperalbuminose Liquide Cephalorachidien sans Reaction Cellulaire. Remarque sur les Caracteres et Graphiques des Reflexes Tendineux, Bull. et mem. de. Soc. Med. des Hop. D. Paris, **40**:1462, 1916.
2. Osler, W.: The Principles and Practice of Medicine, 1892, Appleton, New York.
3. Bradford, J. R., Bashford, E. F., and Wilson, J. A.: Acute Infective Polyneuritis, Quart. J. Med., **12**: 88-126, 1918.
4. Casamajor, L.: Acute Ascending Paralysis Among Troops; Pathologic Findings, Arch. Neurol. and Psychiat., **2**:605-620, 1919.
5. Roseman, E., and Aring, C. D.: Infectious Polyneuritis: Infectious Neuronitis, Acute Polyneuritis with Facial Diplegia, Guillain-Barre Syndrome, Landry's Paralysis, etc., Medicine, **20**:463-494, 1941.
6. Gilpin, S. F., Moersch, F. P. and Kernohan, J. W.: Polyneuritis: A Clinical and Pathological Study of a Special Group of Cases Frequently Referred to as Instances of Neuronitis, Arch. Neurol. and Psychiat., **35**:937-963, 1936.
7. Forster, F. M., et al.: Polyneuritis with Facial Diplegia, New England J. Med., **225**:51-56, 1941.
8. MacNeal, P. S., and Bland, J. H.: The Guillain-Barre Syndrome: Review of the Literature, Current Implications and Report of Seven Cases, Am. Pract. and Dig. Treat., **1**:337-346, 1950.
9. Nielsen, J. M.: Treatment of Neuronitis with BAL, Bull. Los Angeles Neurol. Soc., **15**:61-71, 1950.
10. Hassin, G. B.: Cerebrospinal Fluid Pathways, J. Neuropath. and Exper. Neurol., **6**:172-177, 1947.
11. Hassin, G. B.: Cerebrospinal Fluid: Its Origin, Nature and Function, J. Neuropath. and Exper. Neurol., **7**:172-182, 1948.
12. Reitman, N., and Rothschild, K.: The Non-Infectious Nature of the Guillain-Barre Syndrome with a Possible Explanation for the Albumino-Cytologic Dissociation. An. Int. Med., **32**:923-934, 1950.
13. Delp, M. H., Sutherland, G. P., and Hashinger, E. H.: Post-Diphtheritic Polyneuritis: A Report of Five Cases with Albumin-Cytologic Dissociation Simulating the Guillain-Barre Syndrome, Ann. Int. Med., **24**:618-628, 1946.
14. McGoogan, L. S.: Severe Polyneuritis Due to Vitamin B Deficiency in Pregnancy, Am. J. Obst. and Gynec., **43**:752-762, 1942.
15. Berkwitz, N. J., and Lufkin, N. H.: Surg., Gynec. & Obst., **54**:743, 1932.
16. Posner, A. C., and Hecht, E. L.: Am. J. Obst. & Gynec., **46**:700, 1943.
17. Agnew, A. M.: Am. J. Obst. & Gynec., **51**:758, 1946.
18. Rowan, H. M., and Mayfield, R. C.: Peripheral Radiculoneuritis Complicating Pregnancy, Am. J. Obst. & Gynec., **61**:1380, 1951.



## VIRGINIA'S HEALTH RATING\*

GEORGE COOPER, JR., M.D.,

University of Virginia  
Charlottesville, Virginia

An occasional self-evaluation is wholesome. The United States Department of Commerce published the map shown in Figure 1 in the August, 1953, and mortality rates (Figure 4) reveal a disappointing disparity. In 1950, Virginia's national rank was forty-second, near the bottom of even the low income

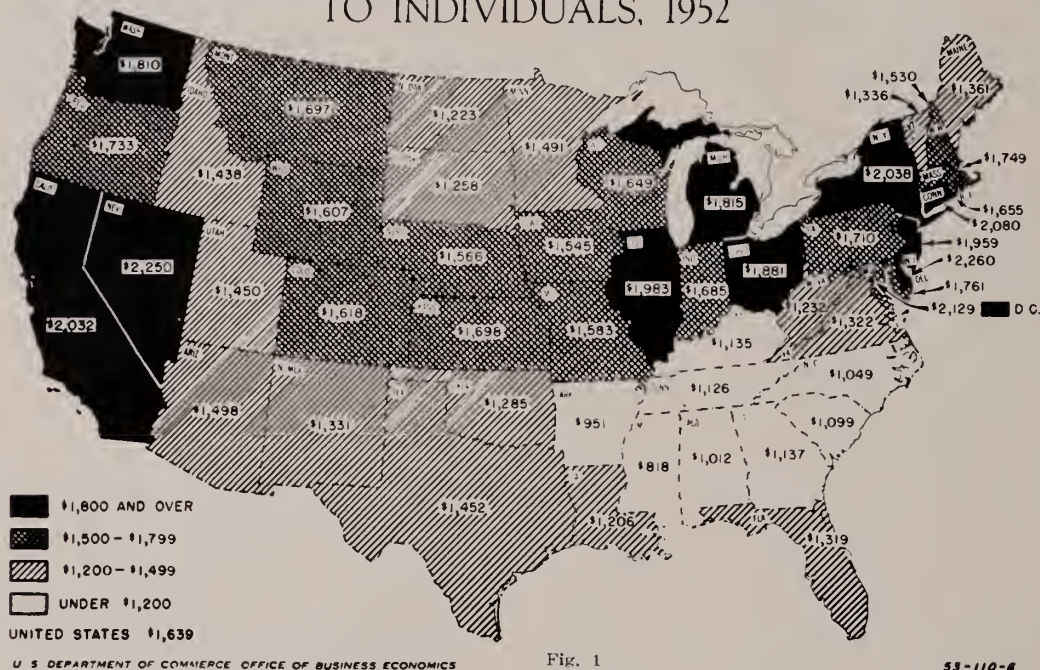
PER CAPITA INCOME PAYMENTS  
TO INDIVIDUALS, 1952

Fig. 1

53-110-8

Survey of Current Business. Individual incomes in the southeastern states are still lower than those in other areas, but the incomes in Virginia are the highest in the southeastern group. Also, in this group, the increase in individual incomes in Virginia since 1949 is exceeded only by the increase in South Carolina (Figure 2). Virginia's national rank in per capita income has risen from 39th in 1949 to 35th in 1952.

In a physician, this gratifying news immediately arouses curiosity as to whether the rise in economic standards has been accompanied by a corresponding rise in health standards.

## TUBERCULOSIS

In the field of tuberculosis, incidence (Figure 3)

From the Department of Roentgenology, University of Virginia School of Medicine and Hospital, Charlottesville, Virginia.

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.

southeastern states. Though explanations can be offered, the fact remains that this performance is exceeded by a number of states with lower per capita incomes and with large Negro populations. In the same year, 1950, North Carolina's national rank in tuberculosis mortality was 17th. On the other hand, our northern neighbors, the District of Columbia and Maryland, with much larger per capita incomes but more urban slums, ranked 48th and 45th. Also, Virginia's tuberculosis mortality rate is decreasing more rapidly than is the national rate (Figure 5).

INFANT, MATERNAL, AND CHILDHOOD  
MORTALITY RATES

A large non-white population with low economic standards is often offered by apologists for a poor health rating in the southeast. Yet, when we check the figures for infant mortality rates by race in the southeastern and bordering states (Figure 6), we see

that Virginia cannot fairly offer that excuse. In 1949, Virginia's non-white infant mortality rate was exceeded by only two states, and her white infant

PER CAPITA INCOME PAYMENTS FOR THE SOUTH ATLANTIC AND SOUTH CENTRAL STATES FOR THE YEARS 1949 AND 1952

National Rank		State	Income		
1949	1952		1949	1952	Increase
48	47	Alabama	\$ 768	\$1,012	\$244
46	48	Arkansas	794	951	157
3	1	Delaware	1,680	2,260	580
2	3	District of Columbia	1,728	2,129	401
36	36	Florida	1,105	1,319	214
42	42	Georgia	874	1,137	263
44	43	Kentucky	867	1,135	268
40	41	Louisiana	1,008	1,206	198
14	12	Maryland	1,408	1,761	353
49	49	Mississippi	641	818	177
45	46	North Carolina	852	1,049	197
37	37	Oklahoma	1,075	1,285	210
47	45	South Carolina	791	1,099	308
43	44	Tennessee	870	1,126	256
29	29	Texas	1,200	1,452	252
39	35	Virginia	1,046	1,322	276
41	39	West Virginia	1,003	1,232	229

Income data obtained from "Survey of Current Business", August 1953. - U. S. Department of Commerce.

Fig. 2

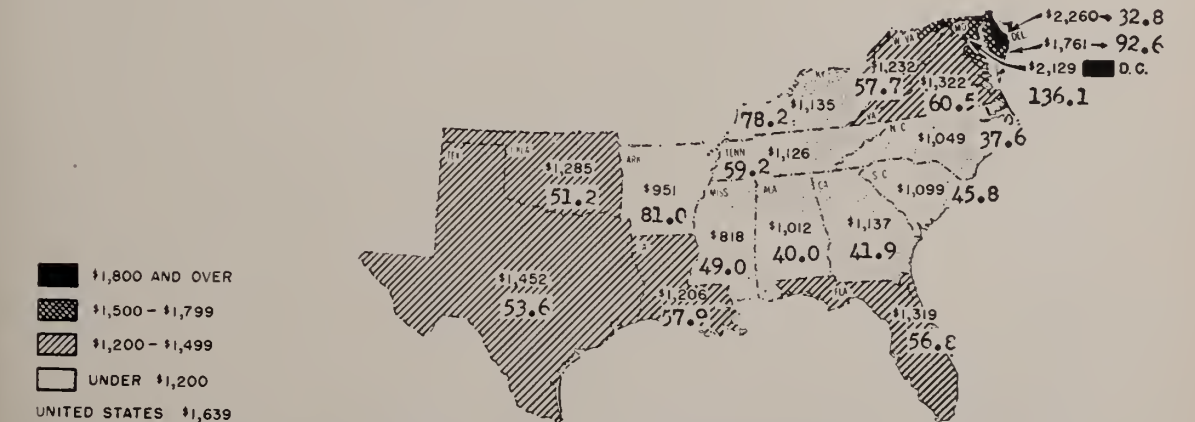
TUBERCULOSIS (ALL FORMS) MORTALITY RATES (PER 100,000 POPULATION), 1950

National Mortality Rank	State	Rate
17	North Carolina (\$949)	18.7
21	Florida (\$1,201)	19.2
25	South Carolina (\$844)	20.9
26	West Virginia (\$1,050)	21.1
30	Oklahoma (\$1,077)	22.6
32	Georgia (\$967)	23.5
34	Delaware (\$1,956)*	23.9
38	Texas (\$1,273)	26.0
39	Mississippi (\$703)	26.3
40	Louisiana (\$1,049)	26.7
41	Alabama (\$847)	27.4
42	Virginia (\$1,147)	27.6
43	Arkansas (\$821)	32.2
44	Tennessee (\$967)	33.7
45	Maryland (\$1,557)	34.8
46	Kentucky (\$913)	36.5
48	District of Columbia (\$1,984)**	49.2

\*Ranked #2 in national per capita income for 1950.  
\*\*Ranked #1 in national per capita income for 1950.  
Rates obtained from National Office of Vital Statistics - April 1953.  
Income data obtained from "Survey of Current Business", August 1953.  
U. S. Department of Commerce.

Fig. 4

NEWLY REPORTED CASES OF TUBERCULOSIS ( ALL FORMS ) WITH RATES PER 100,000 POPULATION 1952



Rates obtained from Division of Chronic Disease and Tuberculosis Public Health Service, U.S. Department of Health, Education and Welfare

Income data obtained from "Survey of Current Business" August, 1953. - U.S. Department of Commerce.

Fig. 3

mortality rate was exceeded by only four. Again we find a number of states with considerably lower per capita income and a large non-white population turning in better records.

But Virginia does not show up poorly in all comparisons. In maternal mortality (Figure 7) and childhood mortality (Figure 8), Virginia ranks above her per capita income rank.

#### OTHER FIELDS

It is more difficult to find significant data in other fields, but comparison of the mortality rates in the infectious diseases which cause the greatest number of childhood deaths, whooping cough and measles, again puts Virginia in an unfavorable light (Figure 9). In the infectious diseases which cause the greatest number of adult deaths, Virginia's mortality rate is very close to her income rating (Figure 10).

#### SUMMARY

While the above is admittedly an incomplete an-

alysis, and contains reason for both satisfaction and dissatisfaction, it certainly would appear that Virginia's health rating can be improved. That our rank in per capita income payments is higher than our health rating in a number of fields is a cause for concern on the part of not just the staff of our Health Department but every physician. It should motivate us

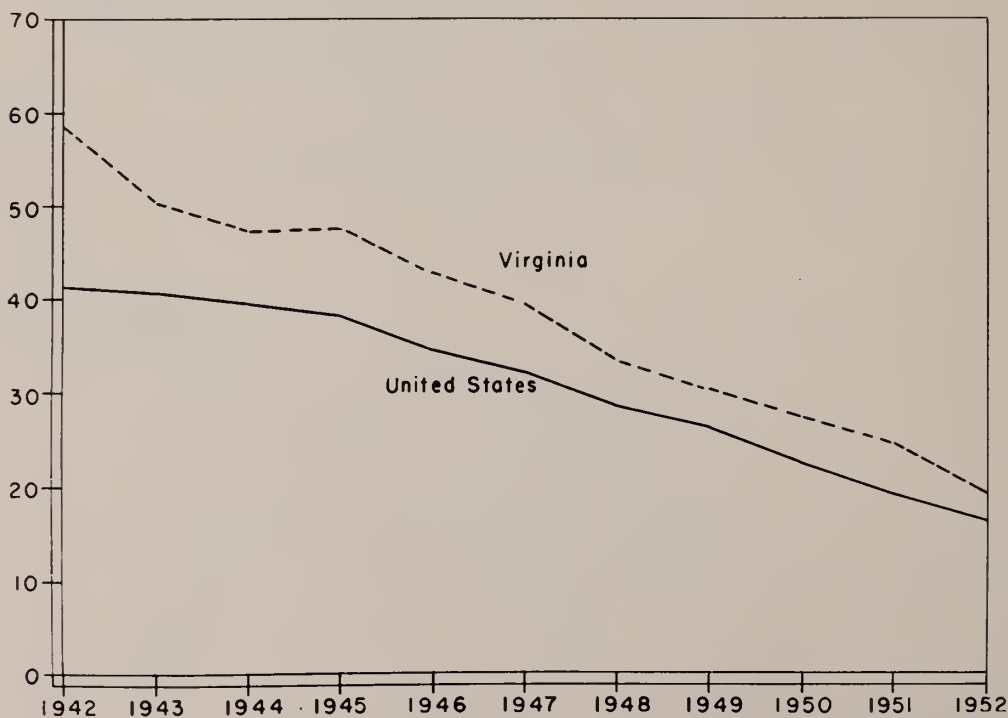
(1) To cooperate with our Health Department and to back its requests for support by the Legislature,

(2) To give generously to the various volunteer health organizations and to participate in their programs,

(3) To encourage the development of better medical facilities and the location of more physicians in our State, and

(4) To conduct our own practice so that the results of our efforts will improve Virginia's health rating.

**TUBERCULOSIS MORTALITY**  
(Rates per 100,000 Population)



Source: State Bureau of Vital Statistics; National Office of Vital Statistics

Fig. 5



INFANT MORTALITY RATE BY RACE, 1949

State	National		Rate	
	Mortality Rank	All Races	White	Non-white
Alabama (\$768) -----	42	31.3	28.9	47.3
Arkansas (\$794) -----	34	33.7	31.7	39.8
Delaware (\$1,680) -----	26	30.4	26.7	48.2
District of Columbia (\$1,728) -----	21	29.1	28.1	30.4
Florida (\$1,105) -----	35	33.8	27.6	49.9
Georgia (\$874) -----	33	33.3	28.6	41.0
Kentucky (\$867) -----	46	41.2	39.9	59.0
Louisiana (\$1,008) -----	37	37.2	27.2	52.3
Maryland (\$1,408) -----	27	30.5	26.5	45.0
Mississippi (\$641) -----	43	39.6	31.7	45.8
North Carolina (\$852) -----	39	38.1	30.2	54.2
Oklahoma (\$1,075) -----	29	30.8	28.3	50.8
South Carolina (\$791) -----	41	39.0	29.5	50.2
Tennessee (\$870) -----	45	40.2	37.8	50.7
Texas (\$1,200) -----	47	42.7	41.4	50.8
Virginia (\$1,046) -----	40	38.1	32.7	53.5
West Virginia (\$1,003) -----	44	39.6	39.0	48.9

Rates are deaths under 1 year per 1,000 registered live births.  
Rates obtained from "Children's Bureau Statistical Series, No. 9" - Federal Security Agency.  
Income data obtained from "Survey of Current Business", August 1953. - U. S. Department of Commerce.

Fig. 6

MATERNAL MORTALITY RATES (PER 10,000 LIVE BIRTHS), 1949

State	National		Rate
	Income Rank	Mortality Rank	
Delaware -----	3	7	5.4
District of Columbia --	2	12	5.6
Maryland -----	14	19	6.5
West Virginia -----	41	33	9.9
Virginia -----	39	34	10.2
North Carolina -----	45	35	11.8
Texas -----	29	36	11.9
Kentucky -----	44	37	12.2
Louisiana -----	40	38	12.3
Oklahoma -----	37	39	12.7
Tennessee -----	43	40	13.3
Florida -----	36	44	17.3
South Carolina -----	47	45	17.4
Arkansas -----	46	46	17.5
Georgia -----	42	47	18.2
Alabama -----	48	48	19.4
Mississippi --	49	49	22.4

Rates obtained from "Children's Bureau Statistical Series, No. 9" - Federal Security Agency.  
Income data obtained from "Survey of Current Business", August 1953. - U. S. Department of Commerce.

Fig. 7

CHILDHOOD MORTALITY RATES  
(PER 100,000 CHILDREN OF AGES 1-14), 1949

State	National		Rate
	Income Rank	Mortality Rank	
Delaware -----	3	11	82.9
District of Columbia ---	2	20	88.3
Maryland -----	14	23	89.4
Georgia -----	42	26	92.2
North Carolina -----	45	28	94.7
Florida -----	36	29	95.8
Tennessee --	43	31	96.9
West Virginia -----	41	32	98.3
Louisiana ----	40	34	101.4
Virginia --	39	35	104.3
Alabama -----	48	36	104.8
South Carolina -----	47	38	108.4
Kentucky -----	44	40	110.3
Arkansas -----	46	41	110.7
Oklahoma -----	37	42	110.9
Mississippi -----	49	46	117.3
Texas -----	29	47	121.6

Rates obtained from "Children's Bureau Statistical Series, No. 9" - Federal Security Agency.  
Income data obtained from "Survey of Current Business", August 1953. - U. S. Department of Commerce.

Fig. 8

MORTALITY RATES (PER 100,000 POPULATION)  
FOR THE YEAR 1949

Whooping Cough		Measles	
State	Rate	State	Rate
Delaware (\$1,680) --	0	Delaware (\$1,680) --	0
District of Columbia (\$1,728) -----	0	District of Columbia (\$1,728) --	0
Maryland (\$1,408) --	0.2	Florida (\$1,105) --	0.3
Florida (\$1,105) ----	0.2	West Virginia (\$1,003) --	0.4
Oklahoma (\$1,075) --	0.3	Louisiana (\$1,008) --	0.6
Louisiana (\$1,008) --	0.6	Maryland (\$1,408) --	0.7
Texas (\$1,200) -----	0.6	South Carolina (\$791) --	0.8
Georgia (\$874) -----	0.7	Georgia (\$874) -----	0.9
Arkansas (\$794) -----	0.7	Texas (\$1,200) ----	1.2
Alabama (\$768) ----	0.8	Virginia (\$1,046) ---	1.3
North Carolina (\$852) --	0.9	Kentucky (\$867) --	1.3
Virginia (\$1,046) --	1.0	Mississippi (\$641) --	1.3
Tennessee (\$870) -----	1.3	Arkansas (\$794) ----	1.4
South Carolina (\$791) --	1.5	Oklahoma (\$1,075) --	1.4
Mississippi (\$641) --	1.5	Tennessee (\$870) ----	1.5
West Virginia (\$1,003) --	2.0	Alabama (\$768) .	1.7
Kentucky (\$867) -----	2.4	North Carolina (\$852) --	2.3

Rates are from "Vital Statistics-Special Reports, Vol. 36, No. 12, 1949" - National Office of Vital Statistics.  
Arrangement by State Bureau of Vital Statistics, State Health Department.

Fig. 9

MORTALITY RATES (PER 100,000 POPULATION) FOR THE YEAR 1949	
Influenza and Pneumonia	
State	Rate
Maryland (\$1,408)	23.9
District of Columbia (\$1,728)	26.6
Florida (\$1,105)	28.6
Delaware (\$1,680)	28.8
Oklahoma (\$1,075)	30.5
Texas (\$1,200)	31.3
North Carolina (\$852)	32.9
Virginia (\$1,046)	33.2

Georgia (\$874)	36.0
West Virginia (\$1,003)	36.9
South Carolina (\$791)	38.0
Louisiana (\$1,008)	38.5
Alabama (\$768)	40.1
Mississippi (\$641)	41.4
Tennessee (\$870)	41.5
Arkansas (\$794)	44.1
Kentucky (\$867)	46.3

Rates are from "Vital Statistics-Special Reports, Vol. 36, No. 12, 1949" - National Office of Vital Statistics.  
Arrangement by State Bureau of Vital Statistics, State Health Department.

Fig. 10

Cortisone Aids in Treatment of Bell's Palsy.

Speedy recovery from Bell's palsy following the use of cortisone was reported in the January 9 Journal of the American Medical Association. Bell's palsy is a common disorder of unknown origin which causes paralysis of the facial nerves and muscles. It usually takes many months to effect recovery. Little or no progress in its treatment has been reported until recently.

Two cases of immediate, complete recovery from the disorder were reported by Drs. William P. Robison and B. F. Moss, Augusta, Ga. One case was that of a 13-year-old girl who recovered within two weeks after cortisone therapy was instituted. The second case was that of a 5-year-old boy who

recovered within three weeks after treatment with cortisone was begun.

"The use of cortisone therapy in these two patients was followed by prompt recovery," the doctors wrote. "No patient suffering from Bell's palsy seen previously in our department over the last 15 years has recovered in less than several months.

"We are encouraged by the results of cortisone therapy in these two patients suffering from the early stages of Bell's palsy. Obviously, we cannot draw sweeping conclusions from observations so limited. We feel justified in the hope that others will test the use of cortisone in this disorder."

The doctors are associated with the department of psychiatry and neurology, Medical College of Georgia.

## NOTES ON PULMONARY TUBERCULOSIS\*

### How Contagious?

Pulmonary tuberculosis is correctly classified as one of the communicable diseases. Because of this and because of the notoriously infectious character of the sputum in a large majority of diagnosed cases since the turn of the century, many persons still regard the disease, without qualification, as *uniformly* and dangerously *contagious*.

A "contagious" disease, strictly speaking, is one which is so readily transmitted from one person to another by direct or in-direct contact, that quarantine long was invoked to prevent spread in epidemic form.

While tuberculosis does not occur in "epidemics" in this country, and is therefore not a "contagious" disease in this sense, enforced isolation has a place in every well-balanced tuberculosis eradication program for the few advanced cases, who refuse to observe precautionary measures in the home and/or in public, and who decline to accept sanatorium care voluntarily.

However, it is felt by the State Health Department that all but a very small residue of those recommended for sanatorium care eventually can be influenced by education or public opinion to accept placement, without resort to quarantine, when beds become available.

Retention to this day and age of the concept that *all* cases of pulmonary tuberculosis are "contagious", literally, results in persons being denied admission to general hospitals, being ejected from hotels, categorically, simply because of having been labelled "tuberculous". Too often no one makes an effort to inquire, sometimes no one expresses the slightest curiosity, as to the *degree* of the patient's communicability, *if any*! Not only is this attitude demoralizing to patients who do not constitute a menace to other people, but it distorts, in an all too fundamental way, the thinking of everyone in any way concerned with the disease. Modern knowledge of tuberculosis cannot be translated into the highest possible type of effective management until it ceases to be hamstrung by out-moded concepts, of which this is one.

As a matter of fact, a majority of cases of pulmonary tuberculosis known today, are regarded by their physicians as "inactive". They require no formal treatment. They lead normal lives. For practical purposes, and to the extent each deserves this rating on the basis of adequate tests, these cases are non-communicable.

Not all cases of *active* pulmonary tuberculosis are communicable in a public health sense, or in *any* ordinary sense.

For example, there is a form which arises from an original or older focus of infection or disease (not necessarily in the lung) which is disseminated by the blood to the lung. For indefinite periods, if not throughout their entire course of healing, these small widely distributed lesions may *never* erode a bronchus and, therefore, may *never* shed Tubercle Bacilli.

While Tubercle Bacilli can be recovered from more than ninety per cent of patients with minimal lesions of the type most commonly observed, where repeated gastric washings are cultured, the remaining ten per cent allegedly are repeatedly negative to these tests and cannot therefore be *very* communicable. Cases undergoing collapse and/or excision therapy are sometimes reduced to a similarly slight degree of communicability soon after cavity closure, or by surgical removal of the area most extensively involved.

From the point of view of those who interpret "activity" in tuberculosis in terms of "treatment requirement" (*in addition* to actual or potential communicability) there would be included many additional patients who take rest periods (systemic rest) and/or reversible collapse therapy for asymptomatic, sub-visible, or "sub-clinical" *active* disease for months or years, who are not communicable in any ordinary public health sense; the simplest of precautions, even in the worst surroundings, should be sufficient to prevent spread of infection.

Actually, repeated, intimate and usually careless contact with tuberculous individuals, in a moderately

\*Prepared by the Virginia State Health Department.



communicable stage, is ordinarily required to contract infection, and disease (requiring treatment) even then does not occur unless the infection has been heavy, the person has little or no resistance to tuberculosis (rare in this country), or his naturally good resistance has been temporarily lowered by over-work, or other illness (at the time of original infection or later).

Tubercle Bacilli are commonly transmitted directly from one person to another by *careless* coughing, spitting or sneezing. Germs may be acquired indirectly, also, by the handling of articles grossly contaminated by tuberculous individuals through careless coughing, spitting and sneezing.

While it is true not all cases of active pulmonary tuberculosis are communicable in a public health sense or in *any* ordinary sense, one can *never* know when any of these cases *might become* communicable, or become *more* communicable (without any change in character or volume of sputum [if present], in x-ray appearance of the lung, or in the general condition of the patient). Since *any* case of active tuberculosis *can* become communicable at *any* time, it must be regarded as communicable *all* the time and appropriate precautions should be taken.\*

Periodic tests should be routine, therefore, and *additional* examinations made upon sputum whenever the patient with active disease has an acute upper respiratory infection, during which time *extra* precautions should be taken *regardless*.

Ever to be borne in mind is the fact that the *degree* of communicability of tuberculous individuals with active disease *varies greatly* depending upon whether sputum is present or absent, whether the sputum is positive to smear, concentrate, or culture, or only to gastric lavage culture, and whether these conditions obtain continuously or intermittently. The *degree of danger* which patients present to their associates will vary correspondingly and *in addition* will be dependent upon:

1. The intimacy and duration of exposure.
2. The relative susceptibility (including age) of the person exposed.
3. The thoroughness and consistency with which patient and contact alike observe appropriate precautions.

\*"Appropriate" precautions vary widely—corresponding roughly to degree of communicability.

Accordingly, at one extreme would be the far-advanced case with copious sputum laden with Tubercle Bacilli, accompanied by an explosive cough, in a patient who is too sick, not too bright, or is wholly indifferent to the welfare of others to take any precautions, living in a physical environment which makes isolation virtually impossible. At the opposite pole would be the apparently healthy, wholly asymptomatic patient, with a minimal lesion, from those gastric washings Tubercle Bacilli can but rarely be recovered by culture; who is intelligent and considerate, and who follows consistently the relatively simple isolation technique outlined for him by his physician.

#### SANATORIUM DISCHARGEES

Many patients today are discharged from sanatoria without benefit of many, if any, sputum culture examinations, some with relatively few examinations by concentrate. Pre-discharge gastric lavage cultures are not routine. In other words, not a few patients in most sanatoria are discharged to their homes with *active* tuberculosis that could be *demonstrated* without great difficulty to be communicable *to some degree*—to say nothing of those who sometimes return home with a frankly positive sputum. The latter are not limited to those discharged against medical advice. Moreover almost *all* dischargees have active disease in the sense that additional treatment must be taken upon return home if they would complete their cure. Accordingly, to a greater or lesser extent, *all* dischargees should be considered as actually or potentially communicable for varying periods of time following discharge regardless of tests made while at the sanatorium. *Small* children in particular should never be permitted in *intimate* or *repeated* contact with them if this can possibly be avoided, no matter how well the patient may feel or how willing he may be to take precautions. On the other hand dischargees, not known to have a positive sputum at time of discharge, constitute a much less serious menace to close adult associates and almost none at all to the public at large when relatively simple precautions are observed.

#### EFFECT OF NEW DRUGS

Without question *degree* of communicability is reduced in a majority of patients who respond favorably to *curative* treatment when specific medicinal aids are included. As is well known, one of the

more spectacular effects noted, following administration of Streptomycin and PAS and/or Isoniazid, to the patient with grossly positive sputum, is an early conversion of the latter to negative in many (but by no means *all*) instances, at least by direct examination (smear). Too often this conversion is more apparent than real (cultures remain positive) and *may* last only as long as drugs are continued.

Sputum cultures sometimes become negative while Tubercle Bacilli still can be found by direct examination. Recently, as a result of application of well-known micro-organism viability tests, certain of these non-culturable Tubercle Bacilli have been shown to retain metabolic function; in most instances, normal culture growth also, could be obtained regularly after 12 to 15 weeks of incubation.

Unfortunately, too, clinical exacerbations occasionally are reported in patients on chemotherapy whose sputum not only is negative to direct examination but who, at least temporarily, no longer shed Tubercle

Bacilli capable of growth upon culture of sputum or gastric contents within conventional time limits (6-8 weeks).

When all is said and done, therefore, and certainly as *of now*, it would appear that the basic rule that "*every* case of active tuberculosis (requiring treatment) should be regarded as actually or potentially communicable" is as sound advice today as it has ever been.

\* \* \* \* \*

For practical purposes and for its own convenience, the State Health Department arbitrarily has grouped "Degrees of Communicability" into four major categories, "*Presumably* non-communicable, Slightly, Moderately, and Heavily communicable." Descriptions of these categories and isolation technique recommended for each, may be obtained by writing the Bureau of Nursing, Virginia State Health Department.

## New Books.

We give below names of some of the newer books in the Tompkins-McCaw Library of the Medical College of Virginia, Richmond, which may be had by our readers under usual library rules:

- Beck—Obstetrical practice. 5th ed., 1951.  
 Burch & Winsor—A primer of electrocardiography. 2d ed., 1953.  
 Graves, ed.—Ulrich's periodicals directory. 7th ed., 1953.  
 Greene & Blomquist—Flowers of the South native and exotic. 1953.  
 Hill—Primates: Comparative anatomy & taxonomy. 1953.  
 Ingalls—Tumors of the orbit. 1953.  
 Ishihara—Tests for color blindness. 10th ed., 1953.  
 Kallmann—Heredity in health and mental disorder. 1953.  
 Lederer & Lederer—Chromatography. 1953.

- Lederle—The fifth year of aureomycin. 1952.  
 Lederle—The nutritional and clinical significance of folic acid. 1950.  
 Lederle—A review of the clinical uses of aureomycin. 1951.  
 National Research Council—Atlas of tumor pathology. Stout—Tumors of the stomach. 1953.  
 New York Academy of Medicine. Schwartzman, ed.—The effect of ACTH and cortisone upon infection and resistance. 1953.  
 Orr—Operations of general surgery. 2d ed., 1949.  
 Patten—Human embryology. 2d ed., 1953.  
 The psychoanalytic study of the child. 1953.  
 Robins—Ethical pharmaceuticals of merit since 1878. 1953.  
 Rosenthal—Diabetic care in pictures. 2d ed., 1953.  
 Roper—People's attitudes concerning mental health. 1950.  
 Snell & Snell—Colorimetric methods of analysis. Vol. 3. 3d ed., 1953.

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### The Functions of a Mental Hygiene Clinic In A Small City\*

Child Guidance and Mental Hygiene Clinics first made their appearance in the larger cities, where the very immensity of the problems they sought to solve made their need apparent and secured financial support for them. A clinic is usually started to meet a specific need, such as that of the juvenile court, the school system, the adult criminal court, the child caring agencies, etc. Each need was great enough to keep the clinical facilities working at high tension. The result has generally been that the organization has developed a specialized and limited function. Thus, a clinic may deal only with juvenile delinquents, with problem children requiring intensive psychotherapy, with adult neurotics, with criminals, etc. Today it is not unusual to find that a city has several psychological and psychiatric clinics, each of which has a special task to perform and each of which deals with a class of patients who are not otherwise provided for.

But the situation is quite different in a smaller community. The same types of needs are present, but there is seldom sufficient support to make a number of specialized clinics, each dealing with one type of patient, possible. One solution of this difficulty is to limit the work to a single need and to establish one form of clinic. There are definite advantages in such a course. If, for example, a child guidance institute is founded to do intensive psychotherapy, it is able to accomplish worthwhile results, and to avoid scattering its energies over too large a field. Its board and its executive can bring before the community examples of the intensive work and its beneficial results. Interest can be aroused in the limited field and both financial and moral support obtained. The appeal, however, will necessarily be to a limited group. Much that needs to be done to meet other mental hygiene needs remains undone, and the general education of the community fails to progress.

There is, however, another possibility. A more generalized type of clinic is possible. It may attempt to meet the various demands for psychiatric

work without limiting itself to a particular field. Both adults and children may be seen, and patients may come from a multitude of sources of referral. A clinic of this type makes a wide appeal within the community because of its value to numerous groups, and thus tends to make mental hygiene known in quarters where it would otherwise have no entrance. Whether the clinic be supported by public funds, by a community chest, by private contributions, or by a combination of these, makes little difference in its work, so long as its executive has freedom from domination by any particular interest.

We may now survey briefly some of the types of work in which such a clinic engages. Since it deals with children, problems arising in school situations will always be prominent. The tendency of the schools to utilize the clinic merely for determining intelligence must be handled in such a way as to stimulate the schools eventually to take over this task for themselves, so that the clinic will be utilized for study and treatment of emotional problems rather than for the determination of mental retardation. Perhaps this can best be accomplished by doing this work only long enough to demonstrate its value. Situations involving social or family problems alone may be handled similarly. As the school administrators are shown by the social workers of the clinic the value of studies of the home-lives of the pupils, they should be encouraged to have their own visiting teachers.

The juvenile court and its probation officers can always make use of psychiatric service. This need is often the starting point for the establishment of clinical facilities, but it should never be allowed to become predominant. The task of the mental hygienist is not only to see patients for the court, but also to educate its officers in our approach to the study and treatment of children. A real benefit is conferred by the clinic only if its influence extends beyond its patients.

Social agencies are today making increasingly large demands for psychological and psychiatric service. Trained social workers now have a back-

\*Article prepared by Gilbert J. Rich, M.D., Ph.D., Director, Roanoke Guidance Center, Roanoke, Virginia.



ground of mental hygiene, which enables them to see in their clients the deeper problems that require attention. This applies to various forms of social endeavor. Child-caring agencies desire help with children exhibiting behavior or personality difficulties. Family case working organizations find problems of marital or vocational adjustment, and the like. The public relief agencies, in their effort to rehabilitate their charges, often see remediable mental factors which retard their work. All of these workers turn to the clinic for aid.

A word may be said about the service which can be rendered to medical organizations. Both physicians in practice and medical clinics see numerous problems in their patients which involve mental hygiene. Free referral back and forth between the internist and pediatrician on one hand and the psychiatrist on the other is helpful to both.

The responsibility of a mental hygiene unit to the community can hardly rest with service to these organizations. It should be available to all persons who cannot obtain this aid in other ways. When such is the case, we find parents bringing in children who present difficulties, and adults coming for advice in regard to family and vocational problems, neurotic symptoms, personality problems, and early psychotic manifestations.

Not the least among the tasks of a clinic is the education of the community in mental hygiene. Only in the very smallest city can the psychiatrist hope to see all who are in need of help. Mental hygiene must be thought of as the responsibility of all per-

sons who come in contact with and influence the life of others, be they doctors, social workers, nurses, probation officers, teachers, or clergymen. The clinic acts only as the educational center, from which influences should radiate toward the people who are in daily contact with human beings. In this way, many who never would reach the clinic benefit by its point of view.

The program outlined here may seem an overly ambitious one to be carried on by a single organization. It must be recognized that the trend is extensive rather than intensive. Our point is that the situation in a smaller city demands just such an approach. Financial support for mental hygiene is not always easy to obtain. An intensive and specialized clinic appeals only to a group with one particular interest. In the large urban centers, this group is sufficient to see that the clinic carries on, but in a smaller place it is not. We recognize that intensive work is the ideal, but compromise is preferable to the absence of mental hygiene facilities. Surely, the smaller city cannot afford a number of psychiatric institutions. The choice is then one between a generalized clinic, subserving diverse functions, and one with limited scope, involving the denial of service to patients who do not fall within its field. It would seem that the answer is obvious. A community clinic provides the greatest good to the greatest number. It must offer a generalized service in all branches of mental hygiene. Only when this is provided can a small city be said really to have facilities in mental hygiene.

---

### **AMEF Contributions Exceed One Million Dollars.**

Contributions to the American Medical Education Foundation during the first 11½ months of 1953 totalled \$1,047,000. The present total exceeds donations received during the entire year of 1952 by

\$141,000. More than 24,500 physicians contributed \$847,361 directly to 70 of the nation's 79 approved medical schools.

Plans for the 1954 campaign were discussed at the third annual meeting of AMEF state chairmen January 24 in Chicago.

## PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.

*State Health Commissioner of Virginia*

### Vaccination Against Poliomyelitis.

Starting in the second week in February a nationwide study to determine the effectiveness of a vaccine in preventing poliomyelitis will get under way. The program will gradually be expanded to include more than two hundred counties throughout the United States and will involve the mass immunization of around one million school children of the second grade. These children will be vaccinated during a non-epidemic period and will be observed during the subsequent polio season. The basic factor for determining the protective effects of the vaccine will be a comparison of the incidence of paralytic poliomyelitis in the vaccinated group with that of children in the first and third school grades and with their siblings.

The vaccine to be used is that prepared according to the directions of Dr. Jonas E. Salk, Research Professor of Bacteriology at the University of Pittsburgh, who developed the vaccine. It is composed of killed virus of all three polio virus types which have been grown in test tube cultures of monkey kidney tissues. The virus is killed by exposure to formalin and is prepared in a watery solution. Samples from each batch prepared are injected into the brains of 10 monkeys and are submitted to many cultures. This procedure is followed in each of the three laboratories testing the vaccine before it is sent out. One of the tests will be conducted by the pharmaceutical manufacturers producing the vaccine; another will be made by Dr. Salk, and the third by the Biological Standards Division of the National Institutes of Health at Bethesda, a branch of the U. S. Public Health Service which licenses and controls the manufacture of all biological preparations.

The vaccinations must be completed by June 1, 1954, to precede the season of high incidence of poliomyelitis. All records of those vaccinated in Virginia, including those vaccinated in city schools, will be sent to the State Health Commissioner. This will make it possible to have all information concerning the vaccinations filed at a central point and will permit studies of the data pertaining to the state as a whole.

The vaccine evaluation project will be under the overall supervision of Dr. Hart E. VanRiper, Medical Director of the National Foundation for Infantile Paralysis, which is bearing the expenses of the mass vaccinations. In Virginia, as elsewhere, medical and scientific societies, state, city and county health offices, and school authorities have promised their cooperation. The Association of State and Territorial Health Officers has appointed a committee consisting of Dr. R. H. Hutcheson (Tennessee), Dr. John D. Porterfield (Ohio), and Dr. Herman E. Hilleboe (New York), to advise with the National Foundation in planning the project. The selection of areas to receive the mass vaccinations are being made by the National Foundation and the Advisory Committee from information supplied by the states. In furnishing the information the states have followed certain criteria established by the National Foundation.

When selections have been made and the vaccine has been prepared and tested, it will be sent to the State Health Commissioner who will distribute it to the areas which will participate in the field tests. They will be notified in advance; much publicity will have been disseminated and many preparations will have been made before the day of administration.

1. A roster of all first, second and third grade pupils in each school in the area—public, private and parochial—will have to be ready. Only the second grade pupils will be vaccinated, the first and third grade children will be controls.
2. The request forms from the parents of the second grade children will be filed.
3. The records showing the name and address of the school will be on hand. The name, address, age, date, lot number of the vaccine, the name of the physician administering it, and follow-up notes will be recorded on these forms.

The vaccine will be given at the schools by volunteer physicians. The first two doses will be given a week apart and the third dose will follow four

weeks after the second. The first and second doses do not produce much antigenic response in the patient and if the blood be examined, low immune titer is found. The response after the third dose is high. The duration of the immunity produced is being studied. Attention is called to the fact that pupils who are absent on the days of administration must be dropped from the study. Special inoculations cannot be arranged.

A joint announcement of the areas selected will be made by the State Health Commissioner and the state office of the National Foundation for Infantile Paralysis.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Dec. 1953	Dec. 1952	Jan.- Dec. 1953	Jan.- Dec. 1952
Brucellosis	1	4	57	47
Diphtheria	15	16	95	166
Hepatitis	258	148	2549	938
Measles	123	175	4863	15818
Meningitis (Meningococcic)	13	12	182	199
Poliomyelitis	13	24	734	690
Rocky Mt. spotted fever	1	1	60	79
Scarlet fever	107	98	882	813
Tularemia	15	4	45	47
Typhoid & Paratyphoid	3	0	80	89
Animal Rabies	48	44	432	473

AMA Exhibit in Nation's Capital.

By special invitation of the museum, the American Medical Association will display its exhibit, "The Organs of the Human Body," at the Smithsonian Institution in Washington, D. C., during 1954. After this year, this exhibit will be available for showings in other museums throughout the country.

A new exhibit—"The Physician's Responsibility in Highway Accidents"—calls the doctor's attention to the fact that he should warn patients about the dangers of driving while under the influence of sedatives, antihistamines or anticonvulsive drugs. For professional showings only, this exhibit may be booked through the AMA's Bureau of Exhibits.

Warning Against Topical Use of Antihistamine Drugs.

Topical use of antihistamine drugs should be limited because sensitivity of the skin to such drugs overshadows their possible efficacy, according to the

Council on Pharmacy and Chemistry of the American Medical Association.

In the December 19 Journal of the American Medical Association, the council reported a survey of some of the country's leading dermatologists disclosed that the majority of them either have limited the use of these preparations or have abandoned them entirely. The survey also revealed:

- 1. That numerous cases of dermatitis have appeared coincidentally with the use of such preparations.
- 2. That although this has not been attributed to all of the antihistamine drugs, they are potentially capable of producing cutaneous sensitivity.
- 3. That such adverse effects can be considered to outweigh their usefulness at the present time.

"Regarding topical therapy in general, the suggestion was offered that until all important drugs or those commonly used for internal administration are proved to have a low index of sensitization, they should not be employed topically," the report added.



## MEDICO-LEGAL NOTES

**Unsuspected Pneumonia in Sudden Death\***

The clinico-pathologic syndrome of sudden death and respiratory infections has received much impetus in recent years, particularly with regard to infant deaths. Through the work of many investigators, we now are hesitant to accept the diagnosis of accidental suffocation in the bed or crib without autopsy, because the latter has shown in the vast majority of cases an unsuspected acute respiratory infection or an interstitial pneumonitis. Indeed, our records show a declining number of diagnoses of suffocation and a corresponding increase in diagnoses of interstitial pneumonitis.

In regard to adults, however, the situation would appear to be in reverse. In the Chief Medical Examiner's office each year about a dozen cases are seen, mainly in the winter months, in which the diagnosis of pneumonia is completely unsuspected until autopsy. During the performance of one of these autopsies, a student nurse, when shown a completely consolidated lung replete with fibrinous pleuritis remarked, "but people don't die from that anymore!" One would gain the impression that since the antibiotic age, pneumonia has come to be lightly regarded except in the debilitated, aged, or the severely injured patient. Several investigators have made a study of the pneumonias of the antibiotic era and have submitted evidence that points to a changing nature of the disease itself. They have found a change in the causative agent (the higher type of pneumococcus being now more prevalent), a more atypical course with often lack of response to chemotherapy, a decreased incidence of typical physical signs of consolidation, and often failure of the peripheral blood to show the expected leukocytosis. Indeed with suppression of bacterial growth by antibiotics and probably an increase in unmasked viral infections, this is to be expected.

We do not take issue with these authors because our special domain excludes these patients from our jurisdiction. Indeed, it is because of this special domain that this article is written. The dozen or so cases mentioned previously occur almost without exception in apparently healthy individuals in the prime of life. The one common denominator, again

almost without exception, is a history of chronic alcoholism with a recent acute debauch. These victims are apparently well except for their alcoholic excesses and are often found dead in bed or have a sudden onset of acute delirium which may necessitate calling a physician. The physician, when confronted with a delirious and manic patient and given the history of prolonged drinking or just coming "off a spree", makes a diagnosis of delirium tremens and often sedates the patient with paraldehyde. Death comes suddenly or after a short coma and is always unexpected. Because of the lack of medical attention or the short duration of attendance, we have not been able to gather any information as to the blood picture. Some of the victims when seen were febrile, others not. In all these cases, autopsy revealed either lobar pneumonia of several days duration, often involving multiple lobes, or massive confluent bronchopneumonia. Blood alcohol determinations show a low or absent level. Other pathologic changes include varying degrees of fatty metamorphosis of the liver, cerebral edema, and occasionally toxic nephrosis. In none of these cases was the correct diagnosis even suspected.

Such deaths have occurred under both home and institutional care. It is the unfortunate lot of the chronic alcoholic to be passed off as a nuisance or a quarrelsome miscreant who needs nothing more than to sleep it off, with a large dose of paraldehyde to help. He is unceremoniously locked up in jail or passed by in the receiving ward in favor of a more deserving or interesting patient. This attitude plus the "don't worry—a shot of penicillin will cure it" philosophy about pneumonia is a fatal combination for these people.

Yet, our basic pre-clinical medical teaching in bacteriology and pathology has stressed the close correlation of alcoholism and respiratory infections. Zinsser's Bacteriology states that three conditions must be fulfilled before obtaining a single case of pneumonia:

1. A susceptible individual.
2. A virulent organism.
3. Additional factors.

The additional factors include chilling, poor nutrition, fatigue, and alcoholism. Anderson's Pathology cites experimental evidence that the epiglottic reflex is inhibited by alcoholic intoxication, thus permitting the aspiration

\*Contributed by George W. Thoma, Jr., M.D., Assistant Chief Medical Examiner, Office of the Chief Medical Examiner, Richmond, Virginia.

of large quantities of mucus, saliva, or even vomitus. These teachings are again met later in clinical medicine. But the lack of opportunity to see the primary pneumonia of a bygone era lulls us into a tendency to classify it with typhoid fever and smallpox as medical curiosities.

A word of caution about the use of paraldehyde in these patients is indicated. Although supposedly the safest sedative for alcoholics, a series of alcohol-

paraldehyde synergistic deaths plus experimental work in our office casts grave doubts about this concept.

In summary, a plea is made for an increased awareness of severe pneumonia with toxic psychosis masquerading as post-alcoholic delirium tremens. By a high index of suspicion and a careful physical examination, many of these patients may be saved by adequate treatment.

---

**Surgical Pathology.** By LAUREN V. ACKERMAN, M.D., Professor of Surgical Pathology and Pathology, Washington University, School of Medicine; Surgical Pathologist, Barnes Hospital and Affiliated Hospitals, St. Louis; etc. St. Louis, The C. V. Mosby Company. 1953. 836 pages. With 913 Illustrations. Cloth. Price \$14.50.

With the establishment of separate departments of Surgical Pathology in large medical centers, the need has arisen for pathologists especially skilled and interested in this field. Lauren Ackerman's text "Surgical Pathology" is designed for both the young pathologist and surgeon, in order that they may well appreciate the diagnostic problems that occur in the operating room and how best they may be handled. The text is divided into 25 chapters, and each, with the exception of the first, treats of a different organ or organ system of the body. The chapters on skin and the central nervous system have been written by Doctor Zola K. Cooper and Doctor David E. Smith respectively. The first chapter is introductory and explains the role of the surgical pathologist and his relation to the surgeon. At the same time it emphasizes the skill in pathology the surgeon must have in order to render good operative judgment. Each chapter treats of the various surgical conditions or biopsied lesions one is apt to meet with either in the operating room or surgical office. The various entities are admirably illustrated both in the gross and microscopically. There is often good enough detail to make diagnoses from the photographs alone which are all in black and white. One sometimes misses discussions about certain "medical" diseases which the surgical pathologist might still have to see. Thus nothing is mentioned of lymph

node changes in Whipple's disease and Letterer-Siwe's disease.

The text is clear, concise and easy reading both for the would-be pathologist and surgeon. It can be well-recommended to both the resident in pathology and surgery who must rotate through the laboratory of surgical pathology in the course of their training. In addition, it serves as a useful reference book to the general pathologist where contact with surgical material is only casual.

S.K.

**Review of Physiological Chemistry.** By HAROLD A. HARPER, Ph.D., Professor of Biochemistry, University of San Francisco, Lecturer in Surgery, University of California School of Medicine; etc. Fourth Edition. Lange Medical Publications, University Medical Publishers, Los Altos, California. 1953. 328 pages. Price \$4.00.

This is a condensed but up-to-date presentation of the fundamentals of biochemistry and should prove very useful to the physician or student who wishes to review the subject in outline form or refer to newer aspects of such rapidly advancing fields as metabolism or metabolic reactions.

The new 4th Edition (1953) is definitely an improvement over the earlier (1951) one, and its usefulness has been greatly increased through revision and expansion. The presentation of the Krebs cycle, for example, which in the previous edition was outmoded, has been brought up-to-date, and the importance of coenzyme A (acetylation) in metabolism has been emphasized.

L.D.A.

## THE MEDICAL SOCIETY OF VIRGINIA

### Conference on Problems of the Medically Indigent

(The following editorial, which appeared in the *Richmond News Leader*, January 4, 1954, is reproduced in order that the membership might understand the need of constructive leadership with reference to solving the problems of the medically indigent.)

#### 49 FREE-LOADERS AMONG US

Virginia's nonprofit community hospitals, struggling for survival against rising costs, are taking a beating from counties and cities that refuse to pay their fair share of expenses for indigent patients from their areas. Knowing that under modern humane concepts a hospital will not turn down the sick and the injured who can't pay, these delinquent localities shrug off altogether or meet in only a limited degree their obligations in a State-local "share-the-cost" program adopted by the 1945 General Assembly. The State, the hospital, or the hospital's home area have to assume the burden of the shirking localities.

Last week's annual report of the Medical College of Virginia Hospital points up the problem. Out of a \$1,000,000 State appropriation for annual maintenance and operation, MCV Hospital spent some \$600,000 to care for medically indigent ward patients whose localities ducked their duty under the State-local program. MCV takes additional losses on expenses that are not covered by the State-local program, for research, out-patient, and emergency-room services. Doctors also work without charge on the medically indigent.

The State bears the brunt of much of the debt at MCV and at the University of Virginia Hospital, but Virginia's other nonprofit community hospitals have to resort to private subscriptions, to higher rates, or other means to meet the deficit. For instance, Lynchburg General Hospital, a medical oasis for a wide area, annually has to ask the local city council to pay the deficit for indigent patients from nearby counties and cities. The harassed but big-hearted Lynchburg Council pulls in its own budget a notch to provide for its irresponsible neighbors.

Hospital administrators have made strenuous efforts to correct the inequities through personal talks with local governments. MCV officials recently argued at length with the board of supervisors in a Tidewater county that had refused to pay a nickel towards \$3,000 in costs for the treatment of three

children severely burned in a fire in that community. The supervisors replied that their county would pay its share when all the other localities in the State had met their obligations, but until that day came the Tidewater community was not going to set itself up as a "shining example."

Well, for that Tidewater county and the other free-loaders around the Commonwealth, a study commission appointed by the 1952 General Assembly has come up with an answer if the 1954 Assembly meeting here this month has the courage to adopt it: The Advisory Legislative Council proposes that the State comptroller hold back from non-earmarked State grants to a locality (such as ABC funds) an amount sufficient to cover the locality's unpaid hospital bills.

Under the present indigent hospital plan, the State sets aside \$800,000 annually to match money from the localities on a 50-50 basis. A quota of State funds is credited to each county according to population, and the State funds are released to the hospitals only as the localities provide matching money.

What are the localities putting up for indigent hospitalization? The State-wide average for local expenditures by cities for the fiscal year ended June 30, 1953, was 43 cents per capita; for counties, 16 cents per capita, and for counties and cities, 25½ cents. Forty-three counties and six cities spent less than 15 cents per capita in local money. Among those were Henrico, 6 cents per capita; Chesterfield, 6½ cents, and Hanover, 7½ cents. There may be some unusual factors to account for the slim expenditures by our neighboring counties, but they seem mighty low compared to Richmond's 61 cents per capita. Richmond spent \$161,000 in local money although the State matched only \$59,000 of this. By comparison, Henrico spent \$3,415 in local money, Hanover, \$1,695, and Chesterfield, \$3,030.

The VALC study commission, headed by State Senator Robert Button, proposes that the State's matching pool be increased to \$950,000, and that \$250,000 of that amount be reserved for such localities as Richmond that go beyond the State matching funds in their local expenditures. The study group felt the State should not imply that such localities have been prudent up to the extent of the matching



money but are being profligate beyond that in meeting admitted needs.

It is the old task of prodding along the tardy localities and giving the more responsible ones some recognition for their unusual initiative. The Medical Society of Virginia and the Virginia Council on Health and Medical Care are sponsoring a conference here tomorrow to discuss the problem of the medically indigent. Representatives of local governing bodies, doctors, welfare workers, and hospitalization officials will attend, and out of the conference may come a realization that if everyone does his share, no one suffers unduly.

---

A Conference on the Problems of the Medically Indigent was held at Richmond's Hotel John Marshall on Tuesday, January 5, and attracted a gathering of over 275 representatives of the medical profession, state and county health and welfare groups and interested civic organizations.

Sponsored jointly by The Medical Society of Virginia and the Virginia Council on Health and Medical Care, the Conference brought into the open, for the first time, those problems which have long been of great concern, not only to the medical profession, but to every agency and group interested in adequate medical care.

The morning session, moderated by Dr. H. B. Mulholland, Charlottesville, was opened by Dr. Vincent W. Archer, President of The Medical Society of Virginia, who stressed the need of those present becoming "missionaries in their own locality" to work for better financing of hospitalization for the medically indigent.

Dr. Archer, offering a general definition of the medically indigent as those persons who normally are able to pay their own way but are unable to meet the cost of any prolonged or serious illness, pointed out that physicians have always been willing to provide the best care possible for "the unfortunates who are unable to pay for medical services." He went on to say that in many instances, however, the best care cannot be provided without hospitalization.

According to Dr. Archer, the answer lies in mass public education at the local level in order that the necessary funds for care of the medically indigent might be supplied through increased local tax levy.

The views of Dr. Archer were shared by H. E.

Alberti, of Winchester, President of the Virginia Hospital Association, who stated that "the real solution lies in our ability to educate, at the local level, county and city governments in their responsibility to take care of their own."

Mr. Alberti was of the opinion that present state appropriations, made to match local funds in financing medical care of the indigent, are generally adequate. However, he pointed out that many counties and cities are not matching the state aid, and are partly responsible for the tremendous burden imposed on the hospitals.

John L. Bruner, Chief, Bureau of Hospitalization and Homes for Adults, State Department of Welfare and Institutions, described the current State-Local Hospitalization Program, which was established in 1946 to "encourage and assist the counties and cities to provide hospital care and treatment for indigent and medically indigent residents of Virginia."

Mr. Bruner stated that in seven years of operation, approximately 55,000 patients have been hospitalized in general hospitals at a cost of \$6,500,000 paid from state and local funds on a 50-50 matching basis. He went on to say that "physicians and surgeons have provided the necessary medical and surgical services to these thousands of patients without charge—as members of the service staffs of the participating hospitals."

Not all counties and cities take full advantage of the program, however. For example, of 126 counties and cities, only 30 either matched or exceeded state funds (13 cities and 17 counties). It was explained that the state appropriation provides a per capita allotment of about 25¢ which if matched by local funds would permit a 50¢ per capita.

An interesting suggestion came from William B. Speck, Field Secretary, League of Virginia Counties, who urged that public health clinics be used more and more to screen patients needing treatment in order that medical problems might be discovered and corrected early.

Programs now in operation for the care of the medically indigent were described by Dr. Kinloch Nelson, director of the home care program operated by the City of Richmond and the Medical College of Virginia, and Dr. Harold W. Miller, Woodstock.

Dr. Nelson fixed the cost of service under the Richmond program at between \$12 and \$13 per patient each year, and credited the program's success

to the joint efforts of the health department, college and welfare agencies. He emphasized the necessity of arousing in the poor a "dissatisfaction with their lot" and encouraging them to make every effort to improve their positions.

Dr. Miller expressed the thought that any method of assistance agreed upon "should be one that will least lessen individual initiative, independence and private enterprise."

The story of the Patrick Henry Hospital was told by Mr. W. H. Story, President of the Hospital Board. The hospital is unique in that twelve counties and five cities participate from the welfare standpoint and is literally "a dream come true."

The hope was expressed that other counties will take heart from what has been accomplished at Patrick Henry and begin work on similar projects of their own.

Dr. H. B. Mulholland, Charlottesville, Chairman of the A.M.A. Committee on the Medically Indigent, delved into the problem from the national point of view and reported that the only really successful plans have been those in which the local communities were stimulated through such media as this particular conference.

According to Dr. Mulholland, plans for indigent care should be given careful medical supervision by physicians and organized to provide, wherever possible, teaching material for teaching institutions.

One of the highlights of the morning session was a word of welcome from Governor Battle, who expressed the hope that from the conference would come

some solution to the problems being considered.

A vote of optimism was inserted when Dr. Walter B. Martin, President-Elect of the American Medical Association, told a luncheon gathering that more than 91,000,000 persons throughout the country are now covered by some form of prepayment plan to meet the cost of illness, and that at the current rate of growth in coverage, participation theoretically would be extended to all in just a few years. He reminded, however, that there always will be those who are unable to meet the cost of insurance.

Dr. Martin stated that responsibility for medical care falls on the individual first, and then on the community and state in that order. He warned against allowing the Federal Government to assume the responsibility, since medical care would become more costly and the door leading to the socialization of medicine would be opened to political pressures.

The afternoon portion of the program featured a question and answer session with all questions directed to a special panel of 15 members.

In answer to a question concerning cost of medical care, it was brought out that 125 private hospitals in Virginia are entirely dependent upon fees from patients for their operations. They are without funds from endowments, donations, etc.

It was suggested that a follow-up Conference be staged next year with a committee appointed to make sure each local community is represented. It was again emphasized that the education process must be conducted on the local level.

---

## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

---

*President*-----MRS. K. W. HOWARD, Portsmouth  
*President-Elect*-----MRS. MAYNARD EMLAW, Richmond  
*Recording Secretary*-----MRS. LEE S. LIGGAN, Irvington  
*Corresponding Secretary*-----  
                                   MRS. LEMUEL E. MAYO, Portsmouth  
*Treasurer*-----MRS. WILLIAM C. BARR, Richmond  
*Publication Chairman*-----MRS. WM. S. GRIZZARD, Petersburg

---

### RICHMOND

The Woman's Auxiliary to the Richmond Academy of Medicine held its annual Public Relations Luncheon, at the Academy Building 1200 E. Clay Street on Friday November 20th.

Presidents of Women's Organizations in the city were invited to be guests at this meeting.

Dr. William T. Sanger, president of the Medical College of Virginia, spoke on The Four Fold Program at the Medical College.

The meeting was planned by Mrs. Randolph Hoge and Mrs. William Harris.

The Romance and Research Committee under the direction of Mrs. George G. Ritchie, Jr., had on display the results of a survey made to determine what voluntary health agencies are available to the public of Richmond, how they operate, how they serve the public and how the Richmond physicians co-operate with these agencies.

Also on display were rare books from the Miller Library at the Academy. Among the books were an anatomy text dating from the fifteenth century. It was written by Paracelsus, a Swiss doctor and chemist at about the same time that Columbus set out to discover the new world. Some of the pages still bear the marks of hot irons used by aroused critics to effectually censor various sections.

Also, many interesting, old instruments and a carved ivory figurine made in sections and used for teaching anatomy to midwives in the first quarter of the seventeenth century, were displayed.

---

The annual Christmas Party of the Auxiliary to the Richmond Academy of Medicine was held at the home of Mrs. Donald S. Daniel, 203 Amphill Road on Friday, December 11.

Mrs. Maynard R. Emlaw, chairman of the party, introduced Mrs. Courtney S. Welton who read an interesting Christmas story.

Mrs. Wyndham B. Blanton, Jr., and Mrs. Aubrey A. Houser, Jr., were in charge of refreshments.

Toys were brought by each member which were distributed to children's hospitals in Richmond at Christmas by Mrs. Ralph S. Faris.

New appointments of committee chairmen for the Richmond Auxiliary:

DINNER DANCE HONORING DOCTOR'S DAY—Mrs. Benjamin Carter.

TODAY'S HEALTH—Mrs. Austin I. Dodson, Jr.  
                                   ALMA GRINELS (Mrs. J. R.)

### PETERSBURG

The Petersburg Medical Auxiliary held their regular monthly meeting on December 1, 1953 in the Conference room of the Petersburg General Hospital. The Program chairman, Mrs. Milton Ende, had arranged to have a program on civil defense. Two of the city firemen came and showed a film entitled "Operation Doorstep". This film was taken during the actual explosion of a test atomic bomb which had been set up to illustrate the actual damage done to homes and people within an eight mile radius. It was an excellent film and we would recommend it to any group that might be planning a civil defense program.

The Auxiliary voted to donate \$416.00 to the Petersburg School of Nursing. This sum was made last year at a dinner dance given by the Auxiliary for the benefit of the Nursing School. As our pledge for 1952 was only \$500.00 and \$916.00 was made, the \$416.00 was held in the bank until this year.

MRS. JOSEPH WHITTLE,  
*Publicity Chairman.*

### The Bricker Amendment.

At the Chicago Conference in November, your President, Mrs. K. W. Howard, represented Virginia on the Legislative panel, and gave the following three minute paper, which is very pertinent to the action now being considered in Washington.

We are asked by the American Medical Association to support Senate Joint Resolution #1, known as the Bricker Amendment, an amendment to the Constitution of the United States, proposed by Ohio Senator John William Bricker, and cosponsored by forty-four other Republican and nineteen Democratic Senators. The A. M. A. urges the active support of the entire medical profession toward the adoption of this measure by the Congress at an early date.

The Amendment relates to that article of the



Constitution which makes it possible for treaties to supersede conflicting state and federal laws, without legislation, by consent of two-thirds of those present in the Senate. The House is not consulted. As interpreted by the Supreme Court, treaty provisions or necessary and proper laws based on treaties can regulate matters the Constitution otherwise reserves to the states and the people, and take precedence over every federal, state and municipal law.

The Bricker Amendment would forbid the ratification of any treaty which violates the Constitution, and would give protection against the possibility of turning our country into a socialistic state by the ratification of "conventions" coming from ILO or the United Nations or any other foreign or international source. Right there is the danger.

The International Labor Organization, known as ILO, functioned as part of the League of Nations. Now it is an arm of the UN. The U.S. government joined in 1934 with the stipulation that we would not be bound by any Convention proceedings. In 1948 The United States approved a revised Constitution of ILO which makes ILO "Conventions", when ratified by our Senate, binding on us too. Americans should understand that ILO is now completely in the hands of a socialistic-government-labor coalition. Their purpose seems to be to get their proposals on the statute books of member nations.

The procedure is to bring up Utopian "Resolutions" or "Recommendations", which are not binding on anyone, and to persuade delegates to approve them for the sake of harmony. Then the majority socialistic group will remake the "Recommendation" into a "Convention", which is binding, and bring it up again. Delegates are embarrassed to reverse their previous vote. In this way "Conventions" passed in ILO conferences become international treaties, binding upon all participating nations whose governments ratify such treaties.

One such "Convention" which was approved at Geneva last June, called "Minimum Standards of Social Security" would pay people for "any condition requiring medical care, of preventive or curative nature, including pregnancy, any morbid condition, loss of earnings due to sickness, injury, unemployment, old age or invalidism, and death benefits." This would obviously bankrupt any government. The medical provisions of this are a complete "blueprint" for Socialized medicine.

The situation calls for immediate action. The issue applies to all activities of the United Nations. Socialism can come in through the back door of law-making by treaty. The danger must be brought home to all thoughtful Americans, and their help enlisted to force action on the Bricker Amendment.

---

## EDITORIAL

---

Doctor J. Bolling Jones of Petersburg  
An Appreciation

WHEN a man has practiced medicine for over fifty years he has known many doctors intimately. They were wonderful people, each one making a specific contribution to the profession. Knowing them so well, in moments of meditation, I have often asked myself—"If I had my life to live over again which of these men would be nearest to the type of the man I would like to be?"

There was a surgeon whose hands flashed with unbelievable speed and dexterity but who was interested far more in Surgery than the man before him. Not him.

There was another so deeply versed in medical literature as to be a reference library within himself, but who thought the realms of sport were childish things. Not him.

There was one, so capable and scientific but to whom, God and his church was a creed for old women only. Not him.

Taking all things into consideration, if I could be like any man of medicine I have ever known I would choose to be cast in the pattern of J. Bolling Jones.

It is unlikely we will ever see such a man again and this is largely due to the modern system of case recordings. A good case history in the files is also a good way to blot out memory. What the brain has no necessity to remember it automatically forgets. Conversely the not keeping of records seems to stimulate memory. Either because of this or some natural gift, the memory of Dr. Jones was so prodigious as to justify the adjective, encyclopedic.

He would start to talking about a case. The man lived down in Prince George County, was named Blank, married the daughter of this or that family. Had five children, two boys and three girls. Then followed a close description of the malady; the results of therapy with no details lacking. These things were told as though they were the happenings of last week. It was startling to know that it all happened 30 to 40 years ago.

Of course, it is a tragedy that all this memory died with him. Had it been recorded it would be for the benefit of others. But, none the less it was there, and being there helped to mold the character of the man I knew. There was something dramatic about it at times. When Dr. Lowndes Peple reported the first case in Virginia of the black widow spider bite, before The Medical Society of Virginia in 1929, only one man discussed it, the rest had never heard of it. Dr. Jones reported a case in a Negro farmer and was familiar with the syndrome that is now common knowledge.

I think he was aware his memory was exceptional. He sent me a case of Bromoderma where he had missed the diagnosis. Later on in my office when I had to keep him waiting, he said "Give me a text book. I want to read up on that Bromide business." When I came back into the room he said "You are absolutely right. You have caught me once but," with a twinkle, "remember you are not going to catch me twice in the same place."

Now be it remembered besides a large medical practice this man had delivered hordes of babies and was a surgeon in his own right. Dr. Everett Evans tells me that, when doing research on surgical shock, he was asked to address the Petersburg Faculty on this subject. A man whom he did not know arose and discussed the subject with such insight and profound logic that Evans in amazement said to a neighbor "Who on earth is this man." The reply was J. Bolling Jones.

Physically, his outstanding trait was his lack of fatigue. I never heard him say he was tired. Dr. Gill, the Episcopal Minister, told me of sitting and talking with Dr. Bolling late at night. Finally, he felt his eyes closing in spite of himself and he said "Dr. Bolling, I wouldn't offend you for my right hand but I am so sleepy, I've got to go to bed." Dr. Bolling looked at his watch. "My God, it's one o'clock and I'm going Fox Hunting at three."

This is fantastic but the answer was his ability to sleep in any position and in any environment. In the horse and buggy days he would wrap the reins around the whipstock, go to sleep, and let the horse find his way home. He could sleep on horseback or in a swaying bumping car. "Nature's sweet restorer" was to him a light to turn off or on at will. Where others were tense, he slept.

His language was homey and there was more than a trace in it of Mark Twain or Will Rodgers.

"I was called down to meet the Seaboard train. When I went inside there sat an obese woman surrounded with bloody towels and a constant drip of blood from the nose. Now Tom—believe it or not, when I took her blood pressure after that terrific hemorrhage, it read 206.

"I said to her, Madam, there are three things I can do: 1st—I can take you off of here and put you in the hospital. 2nd—I can have your berth made down and give you a sedative. But if I were you I wouldn't do either of these things. I would sit up in that seat and drip. I would drip all the way to Miami and everytime I dripped, I'd praise God."

He once presented a paper to the Richmond Academy of Medicine on a case of Hermaphroditism. It was the history of an adolescent, raised as a woman and surgically found to be a man. I was asked to open the discussion and I wondered at first what I could say, for surely here was only an anomaly with no possible therapy. But as the story unfolded there was revealed a practitioner of the Art of Healing, throwing the mantle of his protection around this poor mis-fit. Where others would have said "There is nothing to do", he saved sanity, saved a soul, and made a man to do a man's work in the world. It was not scientific. It was pure artistry.

I wish someone would design a medal with his likeness upon it, for I wish to contribute the motto. It would be a paraphrase of that on the seal of the City of Richmond. VIA MEDICA—AD ASTRA—Through Medicine to the Stars.

THOMAS W. MURRELL, M.D.

---



# Medical Society of Virginia Cancer Committee

*Chairman, George Cooper, Jr., M. D.*

Medical School Building, University, Va.

Reprints of this and preceding Bulletins may be obtained from this office

February 1, 1954

## Case Reports

A 45 year old woman passed both bright and dark blood by bowel intermittently for 18 months. During this time, she was treated by two doctors for hemorrhoids. One of the doctors accepted the hemorrhoids as the cause of bleeding after visual inspection of the anus, the other also did a digital rectal examination.

At the end of the 18 months, she experienced violent low abdominal pain and fresh rectal bleeding. The abdomen was explored and the sigmoid was found intussuscepted into the rectum. The intussusception was reduced. After the operation, the pain was relieved but the rectal bleeding continued.

She was then referred to another hospital where, on digital rectal, only old hemorrhoidal tags were found. At proctoscopy, fresh blood was seen coming down from above the limit of proctoscopic visualization. X-ray examination by means of a barium enema demonstrated a polypoid tumor in the upper sigmoid. That portion of the colon, including a wide margin on either side of the tumor, was resected together with its mesocolon which contained several enlarged nodes. There was no macroscopic evidence of tumor beyond the regional nodes. The pathological study of the tumor showed a benign polyp which had undergone malignant degeneration. There were metastases in a few of the lymph nodes.

*Comment:* 1. Even though actively bleed-

ing hemorrhoids are found, they should not be accepted as the sole cause of rectal hemorrhage. A full investigation should still be conducted to rule out the presence of additional bleeding points higher up.

2. The investigation should include a digital rectal examination (about 40 per cent of large bowel tumors occur in reach of the examining finger), proctoscopic examination (another 35 per cent, approximately, occur within the range of proctoscopic vision), and an x-ray study of the colon with contrast media (about 25 per cent of large bowel tumors are beyond proctoscopic visualization). The discovery of a possible source of bleeding by any one of these means is no reason to omit either of the other two procedures. Multiple malignancies of the colon are not rare and multiple polyps are found more frequently than single ones.

3. Intussusception in the large bowel of an adult, except at the ileocecal junction, should be presumed to be due to the presence of a tumor and is indication for resection.

4. In the above case, correct initial handling would probably have resulted in discovery of the polyp before malignant degeneration had taken place. Surgical intervention at that point would have afforded a vastly improved prognosis. Correct surgical handling at the first abdominal exploration would have avoided the necessity for the second.



## SOCIETIES

---

### State Board of Medical Examiners.

Dr. K. D. Graves, Secretary-Treasurer of the Virginia Board of Medical Examiners, reports that the following were licensed by the Board at its meeting and the examinations December 2nd to 5th, inclusive, 1953:

#### In Medicine and Surgery by endorsement:

Dr. Roger Carroll Baker, Jr., Vienna  
 Dr. John Callin Bates, Grundy  
 Dr. Robert Verlin Beeler, Jr., Charlottesville  
 Dr. David Fowler Bell, Jr., Staunton  
 Dr. Gordon Gilbert Birdsong, Franklin  
 Dr. James Currie Blair, Stonega  
 Dr. William Francis Blair, Norfolk  
 Dr. Edward Franklin Blasser, Fairfax  
 Dr. James Harold Bowles, Sandy Hook  
 Dr. Henry Griffin Bullwinkel, Alexandria  
 Dr. Thomas Walter Caldroney, Newport News  
 Dr. James W. S. Calvert, Bluefield, W. Va.  
 Dr. Charles David Cawood, Middlesboro, Ky.  
 Dr. Robert Raymond Cooper, Jr., Norfolk  
 Dr. George C. Cypress, Jr., Hampton  
 Dr. Edmund F. Daley, Washington, D. C.  
 Dr. Edward Colson Day, Arlington  
 Dr. Adrian Joseph Delaney, Chevy Chase, Md.  
 Dr. James Joseph Dunne, Richmond  
 Dr. Dorothy Armstrong Elias, Washington, D. C.  
 Dr. Amzi Jefferson Ellington, Jr., Richmond  
 Dr. James Hamilton Fagan, Lexington  
 Dr. Daniel Wyatt Ferguson, Radford  
 Dr. Richard Daniel Finucane, Arlington  
 Dr. David Henry Fuller, Jr., Williamsburg  
 Dr. Robert Maxwell, Spotsylvania Court House  
 Dr. Joseph Alan Hertell, Falls Church  
 Dr. Charles King Holmes, Washington, D. C.  
 Dr. Lawrence Boykin Hudson, Martinsville  
 Dr. Harold Joseph Jacobs, Norfolk  
 Dr. Broor Alvin Johnson, Portsmouth  
 Dr. Lee Norman Kastner, Portsmouth  
 Dr. Carmen Jiminez Kaye, Glen Allen  
 Dr. Horace Eskew Kerr, Petersburg  
 Dr. Roy Johnson King, Waynesboro  
 Dr. Robert A. W. Latimer, Manassas  
 Dr. Thomas Miles Leonard, Washington, D. C.  
 Dr. Louis August Leone, Richmond  
 Dr. Leon A. Martel, Jr., Falls Church  
 Dr. Franklin Martin, Jr., Charlottesville  
 Dr. Charles Webster Massey, Richmond  
 Dr. Robert Marcus May, Washington, D. C.  
 Dr. Harold Francis McCann, Arlington  
 Dr. Harry Johnson Miller, Glasgow  
 Dr. Maurice Myles Miller, Norfolk  
 Dr. Charles E. Moran, Dahlgren  
 Dr. Douglas Cockerville Morris, Miami, Fla.  
 Dr. James William Murphy, Newport News

Dr. Henry Darwin Murray, Waynesboro  
 Dr. Phyllis Jean Moffett, Williamsburg  
 Dr. John Richard O'Brien, Bethesda, Md.  
 Dr. Robert Joseph O'Donnell, Arlington  
 Dr. Boyd Nelson Park, Alexandria  
 Dr. Percy Paul Pharr, Gap Mills, W. Va.  
 Dr. Seigul James Polk, Lebanon  
 Dr. Daniel Wells Pratt, Charlottesville  
 Dr. Freeman Leigh Rawson, Jr., Lynch, Ky.  
 Dr. George H. M. Rector, Norfolk  
 Dr. William E. Reeve, Alexandria  
 Dr. Frederick William Rook, Alexandria  
 Dr. James Hal Smith, Christiansburg  
 Dr. James Howard Smith, Petersburg  
 Dr. Rollin Fred Snide, Waynesboro  
 Dr. Henry H. D. Sterrett, Jr., Arlington  
 Dr. Robert Haldane Syme, Jr., Washington, D. C.  
 Dr. Harry Glenn Thompson, Alexandria  
 Dr. Yonne Dorothy Varese, Newbern  
 Dr. John H. Vaughan, Richmond  
 Dr. Seymour Paul Weissman, Williamsburg  
 Dr. Mary C. G. Whitmore, Charlottesville

#### By Examination:

Dr. Emile H. Bisharat, Washington, D. C.  
 Dr. Hoyle Edgar Bowman, Nashville, Tenn.  
 Dr. Dudley Earl Brown, Jr., Portsmouth  
 Dr. Brian C. Campden-Main, Williamsburg  
 Dr. Chai Chang Choi, Richmond  
 Dr. Thomas Christie, Suffolk  
 Dr. Thomas James Conaty, Huntington, W. Va.  
 Dr. Robert Edward DeBord, Richmond  
 Dr. Michael Finegan, Lynchburg  
 Dr. Joseph Erskin Gardner, Denver, Colorado  
 Dr. Eugene Wilder Heatwole, Richmond  
 Dr. Tibor Heda, Richmond  
 Dr. Robert Ritchie Hogg, Louisa  
 Dr. Robert Oscar Hudgens, Richmond  
 Dr. Thorjorn Johan Lassen, Williamsburg  
 Dr. Murdo Macaulay Mackay, Clifton Forge  
 Dr. Robert E. McConnell, Jr., Richmond  
 Dr. William Barton Van Slyke, Charlottesville  
 Dr. Robert Warner Wood, Jr., New York, N. Y.

---

Two Chiropractors were also licensed.

### Medical Society of Northern Virginia.

The last meeting of the Society was on December 15. In addition to a short business session, case reports were given by Dr. H. P. Maccubbin of Winchester on Hepatic Coma; Dr. M. J. W. White of Luray on Two Unusual Cases of Intestinal Obstruction; and by Dr. William C. Humphries of Woodstock on Congenital Anomalies of the Hands and Feet. Following luncheon, Dr. Edward P. Cawley,



Professor of Dermatology at the University of Virginia, by invitation addressed the Society on The Diagnosis and Treatment of the Pre-Cancerous Dermatoses.

Officers elected for 1954 are: President, Dr. E. L. Grubbs, Front Royal; vice-president, Dr. E. L. Hopewell, Strasburg; and secretary-treasurer, Dr. Wm. C. Humphries (re-elected), Woodstock.

The next meeting will be in Winchester, on April 13.

#### **The Williamsburg-James City County Medical Society,**

At its meeting on December 9, elected the following officers for the ensuing year: President, Dr. Hugh G. Stokes, Williamsburg; vice-president, Dr. E. B. Kilby, Toano; and secretary-treasurer, Dr. Carlton J. Casey, Williamsburg. They assumed office at that meeting.

The following meeting was held on January 13 at the Williamsburg Lodge, at which Dr. G. Watson James, III, Assistant Professor of Medicine at the Medical College of Virginia, was the guest speaker. His topic was "Recent Developments in Sickle Cell Anemia".

#### **Arlington County Medical Society.**

At the regular meeting of this Society on December 18, at the Washington Golf and Country Club, officers were elected for 1954 as follows: President, Dr. J. R. B. Hutchinson; vice-president, Dr. C. J. Weimer; secretary, Dr. H. Diamant; treasurer, Dr. T. A. McGavin; member-at-large, Dr. Lloyd B. Burk. All are of Arlington.

#### **Warwick-Newport News Medical Society.**

The new officers for this Society for 1954 are: President, Dr. William A. Read; vice-president, Dr. W. Ward Anderson; and secretary-treasurer, Dr. F. A. Carmines. All are of Newport News.

#### **Roanoke Academy of Medicine.**

At the meeting of the Academy on January 4, Dr. Charles A. Hefner of Roanoke spoke on Needle Biopsy of the Liver and this was discussed by Dr. James Gale. The guest speaker was Dr. Ebbe Curtis Hoff, Medical Director of the Division of Alcoholic Studies and Rehabilitation, Medical College of Virginia Hospital, Richmond. His subject was How the Division of Alcohol Studies and Rehabilitation May Serve the Physician.

Dr. C. D. Nofsinger is president and Dr. Charles B. Bray secretary of the Academy.

---

### **NEWS**

---

#### **1954 Annual Meeting.**

The 1954 Annual Meeting of The Medical Society of Virginia will be held jointly with that of the Medical Society of the District of Columbia from October 31-November 3 at Washington's Hotel Shoreham.

The meeting, which will be called the First Interstate Scientific Assembly, promises to be an historical occasion for both societies, and it is hoped that every member of The Medical Society of Virginia will plan *now* to attend.

Work on the Assembly has already advanced well beyond the planning stage, and it is anticipated that the scientific program will be one of the best ever presented in the East.

Members of the JOINT COMMITTEE ON LOCAL ARRANGEMENTS are: Dr. Ralph M. Caulk, Washington, D. C., *Chairman*; Dr. Alfred A. J. Den, Washington, D. C., *Vice-Chairman*; Dr. James W. Love, Alexandria, *Co-Chairman*; Dr. John C. Watson, Alexandria, *Vice-Co-Chairman*.

FINANCE: Dr. Robert U. Cooper, Washington, D. C.; Dr. Jerome Baum, Alexandria.

PROGRAM: Dr. Theodore Winship, Washington, D. C.; Dr. Benjamin W. Rawles, Jr., Richmond.

SCIENTIFIC EXHIBITS: Dr. Alfred A. J. Den, Washington, D. C.; Dr. William D. Dolan, Arlington.

MOTION PICTURES: Dr. Joel B. Hoberman, Washington, D. C.; Dr. W. E. Baker, Alexandria.

PUBLICITY: Dr. Josephine E. Renshaw, Washington, D. C.; Dr. Milton R. Stein, Arlington.

SOCIAL EVENTS: Dr. Richard H. Todd, Washington, D. C.; Dr. John C. Watson, Alexandria.

#### **A.M.A. Reception.**

The Medical Society of Virginia was host at a reception in honor of Dr. Walter B. Martin, President-Elect of the American Medical Association, on the evening of December 2, 1953, at the Jefferson Hotel in St. Louis.

Held during the Interim Session of the A.M.A.,

the reception was attended by 350 officers of the A.M.A. and their guests.

In addition to its officers and delegates, The Medical Society of Virginia was well represented by a goodly number of physicians attending the meeting. Although it was impossible to know beforehand just who would journey to St. Louis, every Virginia physician registered was called and extended a personal invitation to attend the reception.

In a letter to Dr. Vincent W. Archer, President of the Society, Dr. Martin said, "I want to express to you and through you as President of The Medical Society of Virginia my own very deep appreciation and that of Mrs. Martin for the very wonderful party in our honor by The Medical Society of Virginia. It was the outstanding event of the St. Louis meeting. I will long treasure the memory of it, particularly as an expression of the regard of my fellow practitioners in Virginia."

The Medical Society of Virginia is proud to have had the opportunity to pay honor to one of its most distinguished members.

### The Graduate Lecture Program,

Spring Series, started at the University of Virginia Medical School on February 8 and will last through May 10 as given below:

*February 8*—Dr. Robert H. Ebert, University of Chicago on The Use of Radiosotopes in the Study of the Chemotherapy of Tuberculosis.

*February 15*—(The Staige D. Blackford Memorial Lecture)—Dr. Eugene Ferris, Emory University School of Medicine, Atlanta (title to be announced).

*February 22*—(The Charles S. Venable Lecture)—Dr. Warren H. Cole, University of Illinois College of Medicine, Problems in First Aid.

*March 1*—Dr. William B. Castle, Harvard University, Some Immunologic Aspects of Disorders of the Blood.

*March 8*—Dr. Roy S. Grinker, Michael Reese Hospital, Chicago, Some Newer Aspects of Psychosomatic Medicine.

*March 15*—Dr. Harry Eagle, Bethesda, Maryland, Studies of the Mode of Action of Penicillin.

*March 22*—Dr. George W. Wright, Cleveland, Ohio, Measurement of Respiratory and Cardio-Circulatory Reserves.

*March 29*—Dr. Oliver H. Lowry, Washington University School of Medicine, Washington (title to be announced).

*April 12* (Phi Lambda Kappa Lectureship)—Dr. Charles K. Friedberg, Columbia University College of Physicians and Surgeons, New York, Drugs in the Treatment of Heart Disease.

*May 10* (Phi Beta Pi Cancer Teaching Lecture)—Dr. Paul Aebersold, Oak Ridge, Tennessee, Radioactive Isotopes: Cancer Research, Diagnosis and Therapy.

It is expected that two more lectures will be added to this series.

Although these lectures have been well attended by local physicians and the hospital staff, the authorities emphasize the fact that *all Virginia physicians are welcome and all physicians are invited without a fee.*

### News of Health Officers.

Dr. James H. Fagan of Hancock, New York assumed his duties as Director of the Botetourt-Buena Vista-Lexington-Rockbridge Health District recently with headquarters at Lexington.

Dr. Esther G. Fagan of Hancock, New York reported for duty as Director of the Alleghany-Bath-Covington-Highland Health District on January 1, following three months' orientation. Headquarters are at Covington.

Dr. William C. Fritz accepted a position on November 16, 1953 as Director of the Accomac-Northampton Health District with headquarters at Nassawadox. After completing three months' orientation in the Fredericksburg Health District, he will report for duty on March 1.

Dr. James Fagan and Dr. Esther Fagan were formerly in practice in New York State, and Dr. Fritz was recently in practice at Accomac.

### Southwestern Virginia Medical Society.

The Executive Council and Program Committee of this Society met in joint session at the Maple Shade Inn, Pulaski, on December 3rd, to arrange program for the Spring meeting. This is to be held Thursday, April 15, at the Martha Washington Inn, Abingdon and an interesting program is being arranged. The Society hopes for a large attendance.

### The Tri-State Medical Association of the Carolinas and Virginia

Is to be held in Charleston, South Carolina, February 22 and 23, with headquarters at the Francis Marion Hotel. Dr. G. G. Dixon of Ayden, North Carolina is this year's president. The program includes a symposium, cine clinics, and panel dis-

cussions. A social hour and banquet will be held on the first evening and a number of exhibits will add to the interest of the meeting.

#### **Staff of Lynchburg General Hospital.**

Dr. L. R. O'Brien has been elected chief of staff of the Lynchburg (Va.) General Hospital. Other new officers are Dr. H. Reese Coleman vice-chief of staff; Dr. Macey H. Rosenthal chief of surgery; Dr. George B. Craddock chief of medicine; and Dr. Richard Hawkins secretary.

#### **Annual Spring Congress.**

The Gill Memorial Eye, Ear and Throat Hospital, Roanoke, is to hold its twenty-seventh annual Congress in Ophthalmology-Otology-Rhinology-Laryngology-Facio-Maxillary Surgery, Bronchoscopy and Esophagoscopy in that city April 5 to 10. In addition to the resident members, the Faculty includes many prominent specialists from the various states and England. The lectures will be held at the Patrick Henry Hotel, and the operations and clinical demonstrations will be given at the hospital. Each morning between eight and nine, there will be ward rounds and the groups will be small enough to allow detailed study of cases.

The members will be guests of the hospital for luncheon each day at the Hotel and for the banquet at Hotel Roanoke on Wednesday evening. Entertainment will also be provided for the ladies accompanying their husbands.

#### **The American Academy of General Practice**

Will hold its sixth annual Scientific Assembly in Cleveland, March 22-25. A number of well known speakers will address the general practitioners at the meetings to be held in the Cleveland Auditorium. There will be more than forty-five scientific exhibits and the lecture program will include subjects of special interest to general practitioners. There will be entertainment for the ladies but highlighting the social events will be the President's reception and dance in the ballroom of Hotel Cleveland on the evening of March 24.

#### **The National Conference on Rural Health**

Is to be held in Dallas, Texas, in the Baker Hotel, March 4-6, sponsored by the American Medical Association's Council on Rural Health. Physicians, farm and community groups, and agricultural extension workers from all parts of the country will participate. There will be three general discussion panels.

#### **Dr. F. Elliott Oglesby,**

Richmond, announces the removal of his offices to 1016 West Franklin Street, for the general practice of medicine.

#### **Dr. Vincent E. Lascara**

Of Newport News, class of '34, Medical College of Virginia, recently attended a course in Clinical Neurology at Jefferson Medical College, Philadelphia, given by Dr. Bernard Alpers.

#### **The International Academy of Proctology**

Will hold its sixth annual convention at the Palmer House, Chicago, April 8, 9, 10 and 11th, and all physicians are cordially invited.

An extensive Motion Picture Seminar of Proctologic Surgery (including office techniques) will be held on April 11. Because general practitioners, as well as gastroenterologists and proctologists, face proctologic problems in their daily practice, much of the program has been planned to answer their questions.

There is no fee for attendance as these conventions, as well as all other activities of the Academy, are directed toward the further development of proctology, and all physicians interested in proctology are invited and welcomed to the annual meeting. The program will be available upon request to the Executive Office of the International Academy of Proctology, 43-55 Kissena Boulevard, Flushing, New York.

#### **The Southeastern Surgical Congress**

Is to meet in Birmingham, Alabama, March 8-11, with headquarters at the Dinkler-Tutwiler Hotel. The program includes a large number of speakers from all parts of the United States in addition to which there will be a panel discussion each day. The subjects for these are Traumatic Lesions, Esophago-gastrointestinal Hemorrhage, Liver and Gallbladder Pathology, and Surgical Management of Peptic Ulcer. There are eighty doctors from Virginia who belong to this organization of which Dr. Donald S. Daniel of Richmond is Governor from Virginia.

#### **Pan American Congress of Ophthalmology.**

Plans are well advanced for the Third Interim Congress of the Pan American Association of Ophthalmology in Sao Paulo, Brazil, June 17-21, 1954, under the presidency of Dr. Moacyr E. Alvaro of Sao Paulo. The scientific sessions will be devoted to presentation of recent advances in treatment of diseases of the eye and in the prevention of blindness.



Meeting concurrently in Sao Paulo will be the Eighth Brazilian Congress of Ophthalmology and the Nineteenth International Congress of Oto-Neuro-Ophthalmology. Simultaneous translations in English, Spanish and Portuguese will be provided for the sessions of the Interim Congress.

Many social events have been planned, including opportunities to enjoy typical Brazilian experiences, which will be of particular interest because Sao Paulo is celebrating its fourth centennial this year. Physicians who register for the Congress before the end of February 1954 will receive invitations to dinner parties in the homes of Brazilian physicians.

There will be a registration fee of \$10, which will cover many of the events, including attendance at the other two congresses. Attendance is not restricted to members of the Association.

The Pan American Association of Ophthalmology was founded in 1939 through the initiative of the late Dr. Harry S. Gradle of Chicago and Dr. Alvaro. With the sponsorship of the American Academy of Ophthalmology and Otolaryngology, a committee consisting of Dr. Gradle, Dr. Alvaro and Dr. Conrad Berens of New York organized the first congress, which was held in Cleveland in 1940. Other congresses were in Montevideo, Uruguay, in 1945, in Havana, Cuba, in 1948, and in Mexico City in 1952. As interest increased, it was decided that interim meetings would be advantageous. The first of these was held in Miami Beach, Florida, in March 1950, and the second took place on a Caribbean cruise in January 1953.

#### **Tri-State Tuberculosis Case Conference,**

Composed of specialists from Virginia, North Carolina and West Virginia, is to be held in Roanoke, February 28 to March 2. The meetings will be at

Hotel Roanoke, and three physicians from out of the State will act as moderators—Dr. Richard H. Overholt, of Brookline, Mass., Dr. Julius L. Wilson, of the Henry Phipps Institute of Philadelphia, and Dr. John Barnwell, chief of tuberculosis services of the Veterans Administration, Washington. The Virginia host conference committee consists of Dr. E. C. Drash of Charlottesville, Dr. John A. Sims of Arlington, and Dr. William E. Apperson, of the State Health Department, Richmond.

#### **Stonewall Jackson Hospital.**

The new 63-bed hospital at Lexington was dedicated January 21, and it is hoped will be ready to receive patients in February. The new hospital cost \$1,110,000 and will replace the old Jackson Memorial Hospital which has operated there since 1901. The new hospital will have the latest in medical equipment and other facilities.

#### **Wanted:**

Sr. Staff Physician, 220 bed T.B. Hospital, using Modern Therapy including Chest Surgery. Annual stipend \$6,552.00 to \$7,800.00 with nominal deductions for apartment and maintenance. Based on qualifications, appointee may be started in second or third step. Apply Medical Superintendent, Pine Camp Hospital, Richmond, Virginia. (*Adv.*)

#### **Private Clinic**

Near Richmond desires part time services of specialists in general surgery, E.E.N.T., radiology, obstetrics and gynecology, internal medicine, pediatrics, neurology and psychiatry, urology, and dermatology. Full time services of one general practitioner also desired. Give full biography in first letter. Reply to Box 50, care Virginia Medical Monthly, P.O. Box 5085, Richmond, Virginia. (*Adv.*)

---

## **OBITUARIES**

---

#### **Dr. Thomas Archer Gibson.**

The sudden death of our friend and colleague, Dr. Thomas Archer Gibson, on November 2, 1953, represents an irreparable loss to the Hospital, the profession, and the community as a whole.

Dr. Gibson was a graduate of the University of Mississippi and the University of Pennsylvania Medical School. He served as a resident in Pediatrics under the famous Dr. A. Graham Mitchell, of Cincinnati. On completion of his special training in 1931, he entered into the practice of pediatrics in Winchester, as the first practi-

tioner of his specialty in this section of Virginia. His work in his chosen profession was marked by a high degree of skill, deep human sympathy, wisdom, and the finest ethical standards.

At the onset of World War II, Dr. Gibson promptly volunteered his services, and was appointed a Major in the Medical Corps. He served brilliantly as Executive Officer at Moore General Hospital in Asheville, North Carolina, and was discharged with the rank of Colonel at the end of the war.

In peace and in war, Dr. Gibson served his community and his country beyond the call of duty. It can well be said of him that the world is a better place for his having lived in it.

The deepest sympathy of the members of this Staff, individually and collectively, is hereby extended to the widow of our deceased President and associate, and his sons and daughter, with whom we mourn his loss.

The foregoing Resolution was unanimously adopted by the Medical Staff, Winchester Memorial Hospital, Winchester, Virginia, on this second day of December, 1953.

Committee

FEMBROKE T. GROVE, M.D.

JAMES A. MILLER, M.D.

JOHN B. MCKEE, M.D.

WILLIAM H. SHAFER, M.D.

### Dr. Clifton Ross Titus

Of Bedford, Virginia was born in Loudoun County, Virginia, October 25, 1900 and died in a local hospital, November 21, 1953.

After completing studies in the public schools, Dr. Titus obtained an A.B. Degree from Hampden-Sidney College, and in 1931 was graduated in medicine from the Medical College of Virginia. He practiced his profession several years in Bassett, Virginia. In 1942 he was assigned by the Medical Assignment and Procurement Board as physician to serve the Elks National Home and Bedford County. After the war emergency had passed he decided to remain in Bedford and devote his full time to his private practice.

At the time of his death Dr. Titus was president of the Bedford County Medical Society, co-chairman of the Board of Stewards of Main Street Methodist Church and a member of the Board of Directors of the Hines Memorial Pythian Home. He was a member of the Virginia Academy of General Practice, of which he was a vice-president and treasurer for a number of years, a member of the American Academy of General Practice, The Medical Society of Virginia and the American Medical Association.

In addition to his busy practice he gave liberally of his time and talents to his church and to various community and civic organizations. He was held in high esteem by all who knew him. He recognized his responsibilities to his profession, to his church, and to his community, and he lived up to those responsibilities.

He will be remembered by the members of his profession for his high sense of honor, integrity, ethical standards and devotion to service. The Bedford County Medical Society feels deeply the loss of a true friend and counsellor, and extends genuine sympathy to his family.

We request that this memorial be recorded in the minutes of the Society and that copies of it be sent to his family and to the *Virginia Medical Monthly*.

Committee:

D. H. ROBINSON

W. G. HARDY

W. P. JACKSON

### Dr. Charles R. Anderson.

The death of our friend and colleague, Dr. Charles R. Anderson, on October 24, 1953, represents a very keen loss to the medical profession, the Winchester Memorial Hospital, and to the local and adjacent communities.

Dr. Anderson, seventy-six years of age at the time of his death, received his Doctor of Medicine Degree from the University of Maryland School of Medicine in the year 1898, and for forty-four consecutive years was a general practitioner in Winchester and Frederick County. He was a member of the Medical Staff, Winchester Memorial Hospital, during that entire period, and in 1948 he was elected a life member of The Medical Society of Virginia.

In the practice of medicine, in his home, in his church, and throughout the local and adjacent communities he was held in high esteem by all who knew him professionally or personally, and his influence within the communities was far reaching.

In civic life he exhibited rare talent, and served as mayor of the City of Winchester from 1932 to 1946. Moreover, for twenty-five years he served as a member of the Winchester Common Council.

The deepest sympathy of the members of the Medical Staff, individually and collectively, is thus extended to the survivors of our friend and associate, with whom we mourn his loss.

C. L. RILEY, M.D.

E. WILLIS LACY, JR., M.D.

### Dr. J. Fulmer Bright,

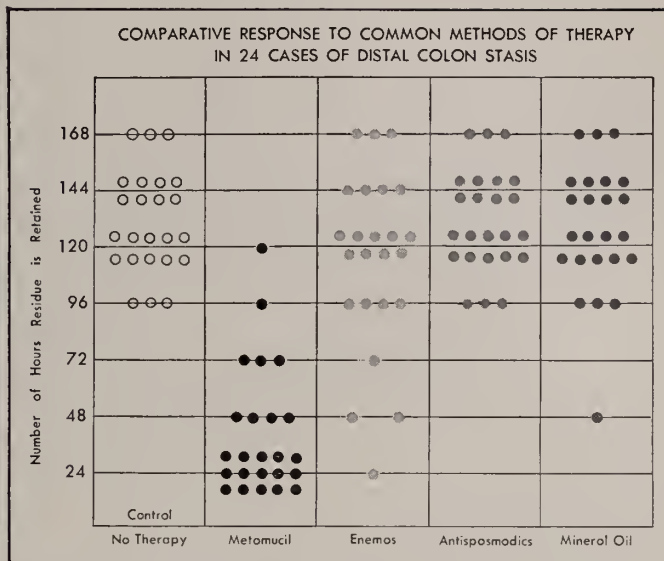
Physician, military leader, public servant, and mayor of Richmond for sixteen years, died December 29. He was a native of Richmond and always took an active part in everything he thought for its good. For sometime he taught anatomy at the Medical College of Virginia and was made professor emeritus when he retired. He was always interested in the military and retired in 1941 as a brigadier-general. After his service as mayor of the city, he became director of the Office of Price Administration and since 1950 he was medical advisor to the State Industrial Commission. Three sisters survive him.

### Dr. Thomas Sanford Cooke,

For many years a well known physician of Portsmouth, died November 15, aged seventy-two years. He was a native of Portsmouth and, after attending local schools, he went to the University of Virginia for the study of medicine and obtained his M. D. degree in 1906. He served his internship at the Norfolk Protestant Hospital, following which he located in Portsmouth and continued practice there until his death. He was an examiner for several life insurance companies. A son and daughter survive him.



Distal Colon Stasis



## Management of Distal Colon Stasis with Metamucil®

The "irritable colon" resulting in distal colon stasis is a hard-to-manage by-product of many abdominal or stress conditions.

Roentgen evaluation of the commonly used methods to combat colonic stasis has shown the value of Metamucil because of its lack of irritation and its high degree of effectiveness\* in this most prevalent type of stasis.

Metamucil is the highly refined muciloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent. It produces smooth fecal bulk necessary to incite the normal peristaltic reflexes, without causing irritation, straining, impaction or interference with the

digestion or absorption of vitamins.

The average adult dose is one teaspoonful of Metamucil powder in a glass of cool water, milk or juice, followed by an additional glass of fluid if indicated. This amount of fluid is essential for the production of "smoothage."

It is supplied in containers of 4, 8 and 16 ounces. Metamucil is accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

SEARLE *Research in the Service of Medicine*

\*Barowsky, H.: A Roentgenographic Evaluation of the Common Measures Employed in the Treatment of Colonic Stasis. *Rev. Gastroenterol.* 19:154 (Feb.) 1952.



RICHMOND'S FINEST + ONE OF VIRGINIA'S LARGEST  
**TERRACE HILL NURSING HOME, INC.**  
*"Nursing Care with Kindness"*



View Showing Part of  
 3½ Acres of Terrace  
 Hill Nursing Home.

TERRACE HILL NURSING HOME is a privately managed nursing home specializing in 24 hour daily nursing care for elderly people, convalescent and chronic cases. Home-like atmosphere. Exclusive park-like grounds. Supervised diets. Nutritious food. Private and semi-private rooms with baths. Accommodations for 45 guests. Under supervision of a resident, registered nurse. Rates from \$45.00 to \$60.00 per week for room, board and general nursing care. Your inspection invited.

*City, State and Nationally Approved and Registered*

*For Further Information or Reservation write to*

**DIRECTOR, Terrace Hill Nursing Home • 2112 Monteiro Ave. • Phone 3-3993 • Richmond 22, Va.**

**MODERN IN EQUIPMENT**

**MRS. PLYLER'S**

**KATE E. PLYLER (1876-1947)**

Third Decade of Nursing



**OLD IN TRADITION**

**NURSING HOME**

**MARY INGRAM CLARK**

**CONVALESCENT — CHRONIC — AGED**

- Equipped for oxygen and transfusions
- 30 special & general nurses
- 24-hour nursing care

- Centrally located
- 50-bed capacity
- Dietician

- Rates from \$42.00 to \$70.00 per week for room, board and general nursing care.



For further information write or call **MRS. GENE CLARK REGIRER, Supt.**

**1613-15-17 Grove Avenue—Richmond, Virginia—Telephone 84-3221**

# A Modern Hospital for the Treatment of Alcoholism Exclusively

► A private hospital offering scientific, institutional, medical, psychological, reflex, reduction and other methods for the rehabilitation of consent patients suffering from alcoholism.

► All equipment modern with facilities to take care of 50 patients both male and female.

► Under the direction of a competent licensed M. D. with five consultant physicians subject to call. Registered Nurses in charge 24 hours daily.



*Approved and licensed by the Virginia State Hospital Board. Atop beautiful Mt. Regis, five miles West of Roanoke, on Highway 11, in the quiet serene mountains of Virginia, conducive to rest, comfort and recuperation. Doctors inspection invited. For information phone or write.*

## WHITE CROSS HOSPITAL

Five Miles West of Roanoke on Route No. 11.

Salem, Virginia — Phone Salem 287





**RICHMOND EYE HOSPITAL  
RICHMOND EAR, NOSE AND THROAT HOSPITAL  
(COMBINED)  
RICHMOND, VIRGINIA**



A new non-profit Community Hospital specially constructed for the treatment of Eye, Ear, Nose and Throat Diseases, including Laryngeal Surgery, Bronchoscopy and Plastic Surgery of the Nose.

Professional care offered a limited number of charity patients.

ADDRESS:

**NATHAN BUSHNELL, III, *Administrator***

**408 North 12th Street**

**JOHNSTON-WILLIS  
HOSPITAL**

**RICHMOND, ♦ VIRGINIA**



**A MODERN GENERAL HOSPITAL  
PRIVATELY MANAGED**

**SITUATED IN THE QUIET OF THE  
WEST END RESIDENTIAL SECTION**

**Medical College of  
Virginia**

**HOSPITAL DIVISION  
RICHMOND, VIRGINIA**

A health center using the latest methods of diagnosis and treatment of disease.

**MEDICAL COLLEGE OF  
VIRGINIA HOSPITAL  
OUT-PATIENT DEPARTMENT  
SAINT PHILIP HOSPITAL  
DOOLEY HOSPITAL**

The patient's welfare is our primary interest.

**C. P. CARDWELL, JR., *Director***





*Specializing in the Treatment of Alcoholism*

## THE KEELEY INSTITUTE

447 W. WASHINGTON ST.

PHONE 2-4413

GREENSBORO, N. C.

REGISTERED WITH THE COUNCIL ON EDUCATION AND HOSPITALS OF AMERICAN MEDICAL ASSOCIATION.  
MEMBER AMERICAN HOSPITAL ASSOCIATION. MEMBER NORTH CAROLINA HOSPITAL ASSOCIATION.

# STUART CIRCLE HOSPITAL

413-21 STUART CIRCLE  
RICHMOND, VIRGINIA

## Medicine:

MANFRED CALL, III, M.D.  
M. MORRIS PINCKNEY, M.D.  
ALEXANDER G. BROWN, III, M.D.  
JOHN D. CALL, M.D.  
WYNDHAM B. BLANTON, JR., M.D.

## Obstetrics and Gynecology:

WM. DUNWOOD SUGGS, M.D.  
SPOTSWOOD ROBINS, M.D.  
EDWIN B. PARKINSON, M.D.

## Orthopedics:

BEVERLEY B. CLARY, M.D.

## Pediatrics:

CHARLES P. MANGUM, M.D.  
EDWARD G. DAVIS, JR., M.D.

## Ophthalmology, Otolaryngology:

W. L. MASON, M.D.

## Pathology:

REGENA BECK, M.D.

## Surgery:

A. STEPHENS GRAHAM, M.D.  
CHARLES R. ROBINS, JR., M.D.  
CARRINGTON WILLIAMS, M.D.  
RICHARD A. MICHAUX, M.D.  
CARRINGTON WILLIAMS, JR., M.D.  
RICHARD A. MICHAUX, M.D.

## Urological Surgery:

FRANK POLE, M.D.

## Oral Surgery:

GUY R. HARRISON, D.D.S.

## Plastic Surgery:

HUNTER S. JACKSON, M.D.

## Roentgenology and Radiology:

FRED M. HODGES, M.D.  
L. O. SNEAD, M.D.  
HUNTER B. FRISCHKORN, JR., M.D.  
WILLIAM C. BARR, M.D.

## Physiotherapy:

MRS. MARGARET ASHLEY

## Director:

CHARLES C. HOUGH

# Saint Albans Sanatorium

RADFORD, VIRGINIA



100 Bed private psychiatric hospital for the treatment of nervous and mental disorders, including alcoholism and addiction.

JAMES P. KING, M.D.  
Director

JAMES K. MORROW, M.D.  
THOMAS E. PAINTER, M.D.

JAMES L. CHITWOOD, M.D.  
Medical Consultant

DANIEL D. CHILES, M.D.  
DAVID M. WAYNE, M.D.\*

\*Director, Bluefield, Va., Office 518 Virginia Street, Phone 4260.



# ST. ELIZABETH'S HOSPITAL

RICHMOND 20, VIRGINIA

## STAFF

GUY W. HORSLEY, M.D.	General Surgery and Gynecology
D. COLEMAN BOOKER, M.D.	General Surgery and Gynecology
AUSTIN I. DODSON, M.D.	Urology
AUSTIN I. DODSON, JR., M.D.	Urology
DOUGLAS G. CHAPMAN, M.D.	Internal Medicine
ELMER S. ROBERTSON, M.D.	Internal Medicine
T. E. STANLEY, M.D.	Internal Medicine
FRED M. HODGES, M.D.	Roentgenology
L. O. SNEAD, M.D.	Roentgenology
HUNTER B. FRISCHKORN, JR., M.D.	Roentgenology
HELEN LORRAINE	Medical Illustration

## ADMINISTRATION

WILLIAM SCOTT	Business Manager
---------------	------------------

## SCHOOL OF NURSING

The School of Nursing is affiliated with The Johns Hopkins Hospital School of Nursing for a three months' course each in Pediatrics and Obstetrics, and with the Tucker's Hospital in Richmond for a 12 weeks course in Psychiatry.

ADDRESS: SUPERINTENDENT OF NURSES

ESTABLISHED 1911

## WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff	PAUL V. ANDERSON, M.D. President
	REX BLANKINSHIP, M.D. Medical Director
	JOHN R. SAUNDERS, M.D. Associate
	THOMAS F. COATES, M.D. Associate
	R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate  
Sent on Request



## TUCKER HOSPITAL Inc.

212 West Franklin Street,

Richmond, Virginia

A private hospital accepting for diagnosis and treatment organic neurological conditions, selected psychiatric and alcoholic cases, metabolic disturbances of an endocrine nature, individuals who are having difficulty with their personality adjustments, and children with behavior problems. Patients with general medical disorders admitted for treatment under our staff of visiting physicians.

Under the Professional Charge of

DR. HOWARD R. MASTERS, DR. JAMES ASA SHIELD  
AND ASSOCIATES

## Gill Memorial Eye, Ear and Throat Hospital

*Announces to the Profession*

**TWENTY-SEVENTH ANNUAL SPRING CONGRESS**

*in*

**OPHTHALMOLOGY AND OTOLARYNGOLOGY**

**April 5 to April 10, 1954**

**GUEST SPEAKERS**

ALSON E. BRALEY, M.D. ....	Iowa City, Iowa	GEORGE R. MERRIAM, JR., M.D. ....	New York, N. Y.
WEBSTER H. BROWN, M.D. ....	Baltimore, Md.	ROGER S. MITCHELL, M.D. ....	Trudeau, N. Y.
LOUIS H. CLERF, M.D. ....	Philadelphia, Pa.	GEORGE W. MURGATROYD, JR., M.D.	Baltimore, Md.
LEWIS L. CORIELL, M.D. ....	Camden, N. J.	C. STEWART NASH, M.D. ....	Rochester, N. Y.
WINCHELL MCK. CRAIG, M.D. ....	Rochester, Minn.	DONALD F. PROCTOR, M.D. ....	Baltimore, Md.
EDWIN B. DUNPHY, M.D. ....	Boston, Mass.	M. ELLIOTT RANDOLPH, M.D. ....	Baltimore, Md.
JOHN FOSTER, M.D. ....	Leeds, England	JOHN R. RICHARDSON, M.D. ....	Boston, Mass.
VICTOR GOODHILL, M.D. ....	Los Angeles, Calif.	CHARLES L. SCHEPENS, M.D. ....	Boston, Mass.
PAUL R. HAWLEY, M.D. ....	Chicago, Ill.	EDMUND B. SPAETH, M.D. ....	Philadelphia, Pa.
HAYES MARTIN, M.D. ....	New York, N. Y.	H. SAUL SUGAR, M.D. ....	Detroit, Mich.
WRIGHT H. LANGHAM, M.D. ....	Los Alamos, N. M.	HARVEY E. THORPE, M.D. ....	Pittsburgh, Pa.
JOHN M. McLEAN, M.D. ....	New York, N. Y.		

*For further information write:*

**Superintendent, Box 1789**

**Roanoke, Virginia**

## McGUIRE CLINIC

### ST. LUKE'S HOSPITAL RICHMOND, VIRGINIA

#### *General Medicine*

HUNTER H. MCGUIRE, M.D.  
MARGARET NOLTING, M.D.  
JOHN P. LYNCH, M.D.  
W. T. THOMPSON, JR., M.D.  
WM. H. HARRIS, JR., M.D.

#### *Orthopedic Surgery*

JAMES T. TUCKER, M.D.  
BEVERLEY B. CLARY, M.D.  
EARNEST B. CARPENTER, M.D.

#### *Ophthalmology*

FRANCIS H. LEE, M.D.

#### *General Surgery*

WEBSTER P. BARNES, M.D.  
JOHN H. REED, JR., M.D.  
JOHN ROBERT MASSIE, JR., M.D.

#### *Dental Surgery*

JOHN BELL WILLIAMS, D.D.S.  
GUY R. HARRISON, D.D.S.

#### *Urology*

AUSTIN I. DODSON, M.D.  
CHAS. M. NELSON, M.D.  
AUSTIN I. DODSON, JR., M.D.

#### *Pediatrics*

HUBERT T. DOUGAN, M.D.

#### *Obstetrics*

W. HUGHES EVANS, M.D.  
W. H. COX, M.D.  
JAMES M. WHITFIELD, M.D.

#### *Bronchoscopy*

GEORGE AUSTIN WELCHONS, M.D.

#### *Roentgenology*

J. LLOYD TABB, M.D.  
STUART J. EISENBERG, M.D.

#### *Pathology*

J. H. SCHERER, M.D.  
ALVIN LONG, M.D.

## RIVERSIDE HOSPITAL, Newport News, Va.



A General Hospital (265 beds) with Departments in Medicine, Surgery, Obstetrics, Pathology, Radiology, Pediatrics and Nursing. The Hospital is accredited by the Council on Medical Education of the American Medical Association for training first year interns, residencies in the surgical specialties for one and two years, general practices two years full approval, internal medicine, and obstetrics and gynecology, and the School of Nursing is accredited by the Virginia State Board of Nurse Examiners.

DAVID E. WATSON,  
*Administrator*

MISS MARY LOUISE HABEL, R.N.,  
*Director, School of Nursing*

# Are you interested, Doctor, in a Pension for Life?

You, as a physician, can now obtain on an individual basis, many of the special benefits available through the pension plans of business and industry — benefits which are of even greater importance to doctors, due to the personal nature of medical practice.

Here are just a few of the advantages of Connecticut Mutual's unique pension plan for physicians:

- 1 When you retire** — at whatever age you choose — the plan provides a unique arrangement for converting some of your investments and savings into lifetime annuity income with all its benefits.
- 2 A larger guaranteed life income** from your investments and savings will be produced at retirement under this plan than is possible under methods not employing the annuity principle.
- 3 Income is guaranteed for life** — thus eliminating the problems arising from investment losses.
- 4 Pension planning counsel** is included in the plan.
- 5 Although it may be years** before you're ready to retire, you protect yourself against any possible increase in annuity or pension costs.

More detailed information is contained in a new booklet entitled: "The Professional Man's Pension Plan." Here, the business aspects of this increasingly important problem are presented for the first time for the benefit of the practicing physician or surgeon.

To get your **FREE** booklet, use the coupon below or write "Connecticut Mutual Pension Plan" on your prescription blank and send it to the address below.

## The Connecticut Mutual

LIFE INSURANCE COMPANY

PIONEERS IN PENSION PLANNING

Hartford, Connecticut



**CONNECTICUT MUTUAL LIFE INSURANCE CO.**  
Hartford, Connecticut

Please send me, without cost or obligation, your new booklet "The Professional Man's Pension Plan."

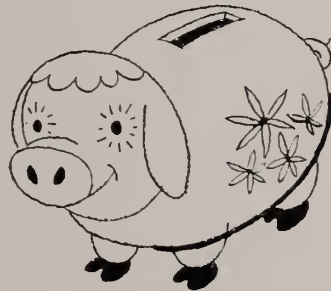
Name ..... M.D.  
Street .....  
City or Town ..... State .....





FOR ALL INFANT FEEDING  
*Baker's Modified Milk*  
 FILLS THE NEED FOR...

Economy



Simplicity



+ H<sub>2</sub>O

Quality



MADE FROM  
 GRADE A  
 MILK

Baker's Modified Milk is made from Grade A Milk (U. S. Public Health Service Milk Code), which has been modified by replacement of the milk fat with animal and vegetable oils and by the addition of carbohydrates, vitamins and iron.

**BAKER'S MODIFIED MILK**  
 THE BAKER LABORATORIES INC.

*Milk Products Exclusively for the Medical Profession*

Main Office: Cleveland 3, Ohio  
 Plant: East Troy, Wisconsin

Division Offices: Atlanta, Dallas, Denver,  
 Greensboro, N. C., Los Angeles, San Francisco, Seattle



## LONG BEFORE HOT FLUSHES APPEAR . . .

Patients presenting such classic menopausal symptoms as hot flushes cause little diagnostic difficulty. However, throughout the period of declining ovarian function which may begin long before hot flushes appear, many women complain of distressing symptoms which though less clearly defined are actually due to estrogen deficiency. For example, insomnia, headache, easy fatigability, and symptoms affecting the bones, joints, and the skin may not be readily identified as due to estrogen deficiency because they may occur years before, or even years after cessation of menstruation.

Investigators<sup>1,2</sup> have found that as the body attempts to adjust itself to declining estrogen production, a number of symptoms may appear which call for the prompt institution of estrogen replacement therapy. These symptoms may be nervous, circulatory, arthralgic, or dermatologic in character because the loss of ovarian hormone "withdraws one of the most important metabolic regulators of the organism"<sup>3</sup> and affects many body functions. If such metabolic imbalance or deficiency is evidenced, the administration of estrogen is clearly indicated.

"PREMARIN" presents the complete equine estrogen-complex as it naturally occurs. "Premarin" not only produces prompt symptomatic relief, but it also imparts a gratifying and distinctive "sense of well-being." It has no odor . . . imparts no odor.

# "PREMARIN"®



*Estrogenic substances (water-soluble), also known as conjugated estrogens (equine). Available in both tablet and liquid form.*

1. Werner, A.: Acta endocrinol. 13:87, 1953.

2. Malleson, J.: Lancet 2:158 (July 25) 1953.

3. Goldzieher, M. A., and Goldzieher, J. W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc., 1953, p. 23.



NEW YORK, N. Y. • MONTREAL, CANADA

**Upjohn**

# less-antigenic penicillin:

---

## Cer-O-Cillin

Trademark Reg. U. S. Pat. Off.

POTASSIUM

*Available as:*

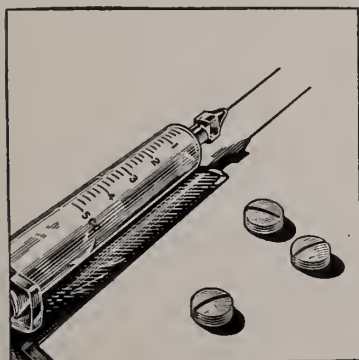
Sterile vials containing 200,000 and 500,000 units Crystalline Penicillin O Potassium.

Bottles of 12 buffered tablets, each containing 100,000 units Crystalline Penicillin O Potassium.

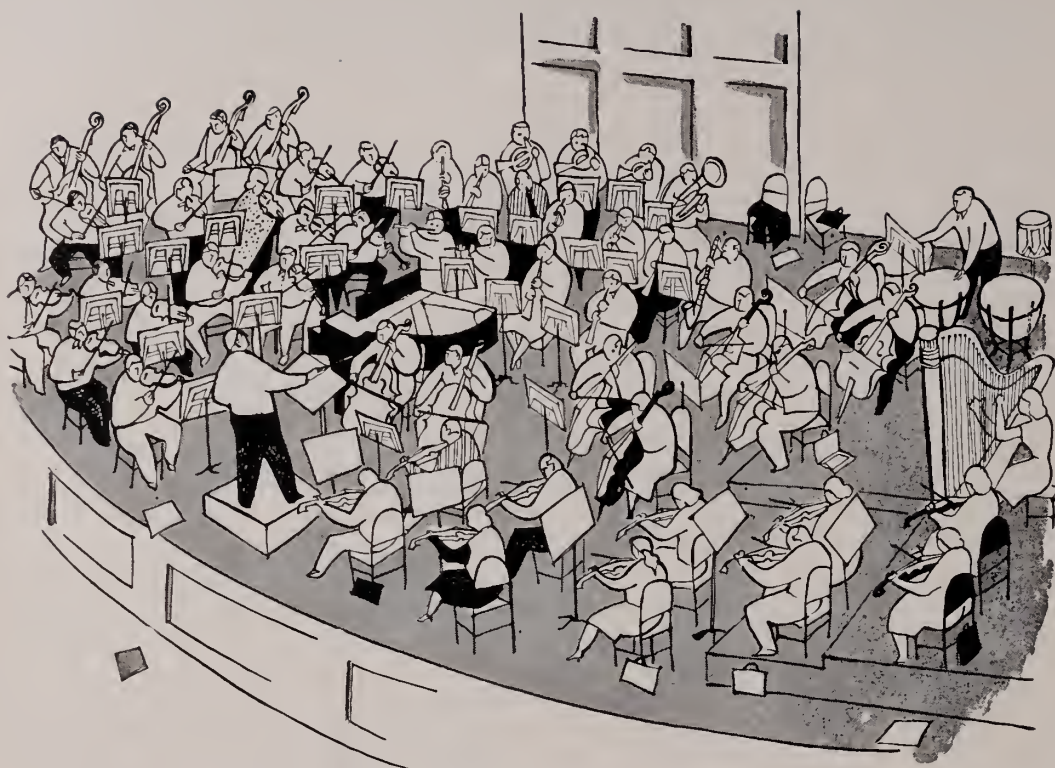
Depo\*. Cer - O - Cillin Chlorprocaine for Aqueous Injection in vials containing 1,500,000 units Crystalline Chlorprocaine Penicillin O.

\*TRADEMARK, REG. U. S. PAT. OFF.

The Upjohn Company, Kalamazoo, Michigan







they could stage their own symphony

... all the patients who represent the 44 uses for short-acting

## NEMBUTAL®

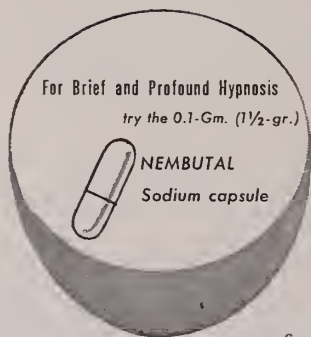
EVER WONDER WHY one drug should survive 23 years of clinical experience (when a lifetime for many is only about five)? Why it should account for 598 published reports? Or more than 44 clinical uses?

Short-acting NEMBUTAL (Pentobarbital, Abbott) is the drug.  
The reasons why?

1. Short-acting NEMBUTAL can produce any desired degree of cerebral depression—from mild sedation to deep hypnosis.
2. The dosage required is small—only about half that of many other barbiturates.
3. There's less drug to be inactivated, shorter duration of effect, wide margin of safety and usually no morning-after hangover.
4. In equal oral doses, no other barbiturate combines quicker, briefer, more profound effect.

How many of short-acting NEMBUTAL's 44 uses have you tried? You'll find details on all in the booklet, "44 Clinical Uses for NEMBUTAL." Write Abbott Laboratories, North Chicago, Illinois.

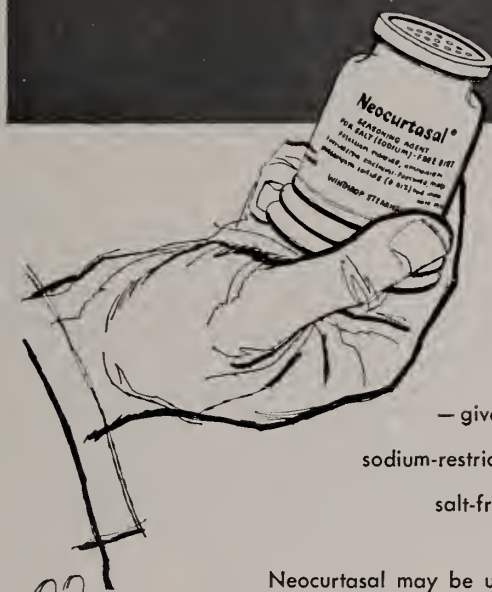
**Abbott**



To ease the blow when  
you say...**"No Salt!"**...

# Neocurtasal®

**appetizing sodium-free seasoning**



— gives a zestful "salty" flavor to the sodium-restricted diet—helps to keep the patient on the salt-free regimen by making meals tasty.

Neocurtasal may be used wherever sodium restriction is indicated—it is completely sodium-free. May be used like ordinary table salt—added to foods—during or before cooking or used to season foods at the table.



Neocurtasal and Neocurtasal iodized  
(potassium iodide 0.01 per cent)  
supplied in 2 oz. shakers  
and 8 oz. bottles.

# Neocurtasal

"...trustworthy non-sodium containing salt substitute"<sup>11</sup>

1. Heller, E. M.: The Treatment of Essential Hypertension. *Canad. Med. Assn. Jour.*, 61:293, Sept., 1949.

**Write for pad of diet sheets.**

**WINTHROP-STEARN'S 'INC.**

Neocurtasal, trademark reg. U.S. & Canada

NEW YORK 18, N. Y. • WINDSOR, ONT.

*A NEW  
BROAD-SPECTRUM  
ANTIBIOTIC*

**ACHRO**



### More Rapid Absorption

### Increased Toleration

### Greater Stability

ACHROMYCIN, a new broad-spectrum antibiotic developed by the Lederle research team, has demonstrated greater effectiveness in clinical trials with the advantages of more rapid absorption, quicker diffusion in tissue and body fluids, and increased stability resulting in prolonged high blood levels.

ACHROMYCIN exhibits a broad range

of activity against beta hemolytic streptococcal infections, *E. coli* infections (including urinary tract infections, peritonitis, abscesses), meningococcal, staphylococcal, pneumococcal and gonococcal infections, otitis media and mastoiditis, acute bronchitis and bronchiolitis, and certain mixed infections.

ACHROMYCIN is now available in 250 mg., 100 mg., and 50 mg. capsules, SPERSOIDS® 50 mg. per teaspoonful (3.0 Gm.), Intravenous 500 mg., 250 mg. and 100 mg. Other dose forms will become available as rapidly as research permits.

LEDERLE LABORATORIES DIVISION

*AMERICAN Cyanamid COMPANY*

30 Rockefeller Plaza, New York 20, N. Y.

The Lederle logo, featuring the word "Lederle" in a stylized, cursive script font, enclosed within an oval border.Large, bold, stylized letters spelling out "MYCIN" in a gradient of orange and yellow, set against a dark background. A registered trademark symbol (®) is visible to the right of the word.

TETRACYCLINE CAPSULES LEDERLE

[As advertised in the journal of the AMERICAN MEDICAL ASSOCIATION]

# Income\* for members of the Virginia Medical Profession from the first day\*\* of sickness or injury . . . .

*now!*

Not for only 26 weeks—Not for only 52 weeks

## but even for your entire lifetime

House Confinement is not required at any time  
Accidental loss of hands, feet or eyesight pays  
monthly benefits—not just lump sum.

### *tax free dollars*

Disability income is not taxable. For example: \$3600.00 a year  
from our policy is equivalent to about \$5000.00 regular income.

### *extra benefits*

Double monthly benefits when you  
are hospitalized for as long as three months.  
Unusually large accidental death benefits  
Double benefits for specified travel accidents

### *plus important features*

Waiver of Premium Provision  
Commercial Air Travel Passenger Coverage  
No automatic termination age

*\*In the event of  
total disability and  
Total Loss of Time*

*\*\*Benefit payments  
start from first day  
of medical attention*

*Mail Coupon ➔  
today while you  
are still healthy*

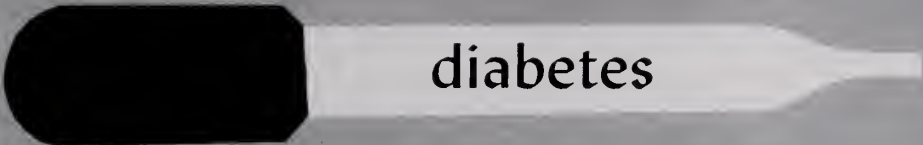
UNITED INSURANCE COMPANY, Lifetime Dept.  
Eig Building, Silver Spring, Maryland

*I would like to know more about your lifetime income protection.*

NAME \_\_\_\_\_ AGE \_\_\_\_\_

ADDRESS \_\_\_\_\_

*or clip to your letterhead*



diabetes

"the ideal detection center is the office of the family physician"<sup>1</sup>

**Found:** 20,255 "new" diabetics in one year in the private practice of 5000 physicians responding to a nationwide poll.\* Of these, 81% were detected by urine-sugar analysis; 62% of the physicians used *Clinitest*.

Only 19% of the diabetics in this survey were detected by findings other than glycosuria. "Every patient therefore, should have at least one urinalysis as part of his examination, even if the purpose of his visit is only the removal of wax from the ears."<sup>2</sup>

CLINITEST<sup>®</sup>

BRAND

for detection of urine-sugar

**\*Data from nationwide poll: Diabetes in daily practice**

70% were over 40.

40% had a family history of diabetes.

65% were overweight.

1. Blotner, H., and Marble, A.: New England J. Med. 245:567 (Oct. 11) 1951.

2. Steine, L.: GP 8:45 (July) 1953.

Ames Diagnostics

Adjuncts in clinical management



**AMES**

COMPANY, INC. • ELKHART, INDIANA

Ames Company of Canada, Ltd., Toronto

83154






adequate protection

ONE  
CENT

costs so little

No child need be denied protection against the threat of rickets and vitamin A and D deficiencies.

Mead's Oleum Percomorphum is a potent, dependable source of vitamins A and D . . . that can be given at a cost of about a cent a day.



Specify Mead's Oleum Percomorphum . . . the pioneer product with twenty years of successful clinical use. Dosage, 5 to 10 drops daily.

Available in 10 cc. and economical 50 cc. bottles; also in bottles of 50 and 250 capsules.

**MEAD'S OLEUM PERCOMORPHUM**

*The economical, potent vitamin A and D drops*

**MEAD**

MEAD JOHNSON & COMPANY • EVANSVILLE, IND., U.S.A.

# VIRGINIA MEDICAL MONTHLY

## *Contents*

Obstetrical Complications, Charles Hampton Mauzy, Jr. . . 103

Report of 700 Cases of Irritable Colon in Private Practice,  
Robert M. Miskimon . . . 109

Recent Therapeutic Agents in the Treatment of Anemia, with Special  
Reference to Vitamin B-12, Thomas W. Green . . . 114

A Review of Recent Advances in Radical Pelvic Surgery, John L. Harris, Jr.,  
Hugh H. Trout, Jr., Horace A. Albertson, and Alfred P. Jones . . . 117

Massive Hemorrhage in Peptic Ulcer, M. K. King . . . 121

(Continued on page 6)

NEW ACADEMY  
OF MEDICINE  
MAR - 2 1954  
LIBRARY

hard-hitting  
antibiotic

**ILOTYCIN**

(ERYTHROMYCIN, LILLY)

**IN TABLETS AND  
PEDIATRIC LIQUID**

*Lilly*

the originator of Erythromycin

# Chloromycetin<sup>®</sup>

(Chloramphenicol, Parke-Davis)

*truly one of the*

PARKE, DAVIS & CO.



# Virginia Medical Monthly

Vol. 81, No. 3  
WHOLE No. 1221

RICHMOND, VA., MARCH, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## OBSTETRICAL COMPLICATIONS Their Management Today and Twenty Years Ago\*

CHARLES HAMPTON MAUZY, JR., M.D.,  
Department of Obstetrics and Gynecology, Bowman  
Gray School of Medicine of Wake Forest College,  
Winston-Salem, North Carolina

In 1931, twenty-two years ago, the author, a third year medical student at the University of Virginia, began the study of obstetrics under the late Dr. Tiffany J. Williams. Later he returned to the University of Virginia Hospital to complete a residency in obstetrics and gynecology under the same leadership. Dr. Williams was not only a great teacher but also an excellent clinician who kept abreast of new knowledge and applied the same with sound judgment.

It is the purpose of this paper to show a comparison in the management of some obstetrical complications as taught to me over 20 years ago and our method of management of similar conditions. These teachings are taken from my recorded notes and recollections when a medical and postgraduate student.

One must remember that 20 years ago there were no sulfonamides, no antibiotics and no blood banks. The application of these drugs and a more liberal use of blood has practically eliminated puerperal infection of types so commonly seen and dreaded in the past. The Rh factor was unknown and many a violent and occasional fatal reaction was the result of Rh-positive blood being given to a sensitized Rh-negative female. The active principle of ergot, ergonovine, was not available. The use of spinal anesthesia in obstetrics was considered heresy except by Dr. Cosgrove and his group at the Margaret Hague Hospital.

It is also true that two decades ago the majority of patients with both normal and complicated pregnancies were delivered in the home, often being admitted to the hospital only as a last resort or in extremis. Fortunately, today the majority of de-

liveries occur in a hospital where facilities are usually adequate and properly trained personnel are available for complications.

Let us then consider a few of the most common complications in obstetrics and compare their management of yesterday and that of today.

### THREATENED ABORTION

It has been conservatively estimated that one out of every 10 confinements ends in spontaneous abortion. My notes read, "Threatened abortion should be treated by rest in bed with the foot of the bed elevated, heavy doses of sedation and an ice cap on the lower abdomen if the uterus is hyper-irritable. Palliative treatment should not be kept up too long; if the patient is still bleeding at the end of 14 days, allow her to get up with the hope that abortion may occur."

The magic formula for the prevention of abortion in the past 20 years has been vitamins and endocrines. First, we were told that a lack of vitamin E was causing abortions and wheat germ oil was literally poured into our patients. Other vitamins have been implicated and likewise used to an excess. Next, progesterone became the wonder drug and marvelous results were obtained with infinitesimal doses. Then came the era of estrogen or stilbestrol, and, finally, a combination of both estrogen and progesterone. Today, one is not at all certain that any of these hormones or vitamins are specific in the treatment of threatened abortion.

Several years ago Colvin<sup>1</sup> made a study of 1570 cases of threatened abortion occurring in the private practice of his group. None of these patients received any specific treatment. Seventy per cent went on to term and delivered a normal infant. In those who aborted careful examination of the prod-

\*Read by invitation before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953, as part of the Obstetrical and Gynecological Symposium.

ucts of conception revealed that only 62, or 3.9 per cent of the total cases of threatened abortion could have been theoretically salvaged by hormone treatment. The remainder had blighted products of conception or anomalies of the fetus and secundines which were incompatible with life.

We have formerly used heavy dosage of estrogen in the management of threatened abortion, and we sincerely doubt today that they have been of any value.

Our management is essentially that of 20 years ago, namely, the patient who threatens to abort is advised to rest in bed for several days and if bleeding and cramps do not cease, she is advised to get up and move around. We believe that most of these pregnancies are abnormal and the sooner the uterus is emptied the better. It is perhaps true, as Colvin has pointed out, that hormonal treatment may be of some value in less than 4 per cent of all threatened abortions. To treat all threatened abortions with endocrines and vitamins in order to salvage 4 per cent seems wasteful, expensive and time consuming. Only when hormonal assays can be made and a deficiency demonstrated would it seem wise to administer endocrines.

#### ECTOPIC PREGNANCY

Thirty-two women died in North Carolina during the past five years because the diagnosis of ectopic pregnancy was not suspected. We were taught to be ectopic minded, treat shock and operate. There has been no change in the management of ectopic pregnancy; once the diagnosis has been made or suspected, operation is imperative. We do not hesitate to operate upon these patients in shock provided blood is available and running in the veins. Valuable time and blood may be lost in attempting to restore normal blood pressure and often this delay may prove fatal. Having observed the work of Allen and his group at the Presbyterian Hospital in Chicago, we have recently attacked the problem of ectopic pregnancy by the vaginal approach. Utilizing a good posterior colpotomy for suspected ectopic pregnancy, we have been able to visualize both tubes and ovaries in the majority of patients. In the past six months we have done 8 colpotomies when ectopic pregnancy was suspected. The diagnosis was positive in 5 patients and the pathological tube was removed per vagina in 4 cases. The fifth patient required a laparotomy because of extensive adhesions. In two

patients the adnexa were normal and in a third patient pelvic inflammatory disease was present. These last three patients were spared a laparotomy and were discharged from the hospital on the third day.

By this means of positive approach to the diagnosis of suspected ectopic pregnancy we no longer explore the abdomen for our diagnosis nor do we wait for the classical signs of ruptured ectopic pregnancy in those suspected cases. The patient's hospital stay has been definitely shortened and the morbidity has been decreased.

#### TOXEMIA OF PREGNANCY

Volumes have been written and a great deal of research has been done on toxemia of pregnancy since 1931, but the etiology remains unknown. New drugs have been tried and old ones re-evaluated but as yet we have no specific therapy for this condition. Toxemia is still the leading cause of maternal deaths. Cosgrove<sup>2</sup> has pointed out that the management today is essentially that of yesterday and consists of three phases: (1) prophylaxis, (2) treatment of the symptoms, and (3) termination of the pregnancy.

Great progress has been made in the prevention of toxemia of pregnancy; more women are receiving prenatal care than ever before. With proper diet, weight control, restriction of sodium and correction of anemia, many of the toxemias of pregnancy are eliminated.

The patient with signs and symptoms of toxemia, no matter how mild, should be hospitalized for proper evaluation and treatment. The term "mild pre-eclampsia" is only relative and can often proceed quickly to eclampsia. We admit all our patients to the hospital when the blood pressure becomes elevated in the third trimester to 140/90 or above, or those who show 1+ or greater amounts of albuminuria on a clean or catheterized urine specimen. We believe the risk is too great to attempt to control these signs on an out patient basis. The management of toxemia of pregnancy in the North Carolina Baptist Hospital is bed rest, high protein, salt-free diet, sedation, careful check on the intake and output of urine, frequent blood pressure determinations and daily urinalyses. Blood chemistry studies are made, but, except for uric acid findings, these have been of little clinical value. For sedation we prefer phenobarbital, morphine and magnesium sulfate. The dose of these and other drugs must be individualized.

The third phase in the management of toxemia is interruption of pregnancy which removes the one etiological factor that is always present. A decision as to when and how to empty the uterus is one of paramount importance and requires good obstetrical judgment. Dr. Williams was an advocate of conservative treatment in the management of toxemia. He realized, however, as we do today, that the longer the toxemia exists the greater the chances are for the patient to have residual hypertension and that the duration of toxemia is definitely related to fetal survival. In the interest of both mother and child pregnancy is interrupted at 34 to 36 weeks if the toxemia has been present for three weeks or longer. Severe pre-eclampsics in the late weeks of pregnancy not responding to treatment, and eclampsics whose convulsions have been controlled for a period of 24 to 48 hours, should have the uterus emptied in the safest and easiest manner.

Twenty years ago the Voorhees' bag was commonly used as a method of inducing labor. Brame,<sup>3</sup> in an analysis of 112 eclampsics at the University of Virginia Hospital from 1925 to 1934, found a maternal mortality of 50 per cent. Bags were used 32 times as a means of induction with six deaths, an incidence of 19 per cent. A comparative series of 114 eclampsics from the same institution has been collected by Thornton.<sup>4</sup> These cases cover the period between 1939 to 1949. No bags were used in this series and there were only seven deaths—an incidence of 6.1 per cent. Thornton has informed me that to the best of his knowledge no bags have been used for any obstetrical procedure in the past 10 years. We believe that Voorhees' bags have no place in the armamentarium of the obstetrician of today and should be relegated to the past.

Provided the patient is near term and the head is engaged, the easiest and simplest way to induce labor is artificial rupture of the membranes. This procedure should be done only if the cervix is favorable or "ripe", meaning that it is 50 per cent effaced and 2 to 3 cm. dilated. If these conditions are not present, we<sup>5</sup> have found that the administration of intravenous Pitocin is a valuable aid. We use 5 minims of Pitocin in 500 cc. of 5 per cent glucose in water. The administration is begun with 9 to 12 drops per minute with the patient under constant observation; the blood pressure, fetal heart rate, intensity and duration of the uterine contractions being carefully observed and recorded. It may be

necessary to repeat this procedure for several consecutive days before the cervix becomes favorable or spontaneous labor begins. This procedure carries the inherent dangers of (1) elevating an abnormal blood pressure to dangerously high levels, as reported by Jackson and Decker.<sup>6</sup> We have constantly been on the alert for this possible pressor effect of Pitocin and have had no cases to date; (2) a prolonged or tetanic contraction of the uterus may occur and cause fetal death; (3) the greatest hazard is that of causing a ruptured uterus. Realizing that these accidents do and can happen, intravenous Pitocin should never be administered except in a hospital and with the patient under constant observation.

If the cervix is not favorable for artificial rupture of the membranes and intravenous Pitocin fails or cannot be properly administered, abdominal delivery by cesarean section under local anesthesia is the procedure of choice. The abdominal approach should also be used when immediate delivery seems imperative as, for example, the fulminating type of toxemia or the onset of oliguria and anuria.

#### ABRUPTIO PLACENTA

Dr. Williams taught: "The uterus should be emptied as soon as possible with acute hemorrhage, preferably delivery is done from below. One should make certain after delivery of the infant and placenta that the uterus contracts firmly. If it does not, bleeding may have occurred in the uterine musculature and will then require hysterectomy. In minor cases, watch the patient closely and be ready to operate if necessary. Existing shock must be treated and match blood in any bleeding case and be ready to transfuse if necessary."

In the management of abruptio or premature separation of the placenta there seems to be a definite swing today to the conservative side; as a result, less cesarean sections are being done for this condition. There are, however, two definite schools of therapy. The radical favor termination of these pregnancies by immediate section in the interest of both mother and child. The more conservative advocate induction and stimulation of labor with a vaginal delivery. We would classify ourselves as neither extremely radical nor conservative. We base our therapy on the severity, the type of cervix present and the condition of the infant. Acute hemorrhage which is not successfully combated with transfusion, a long firm cervix which will prolong labor, and associated tox-



emia with beginning oliguria and anuria are indications to us for cesarean section. We have done cesarean sections in the interest of the child but doubt very much that it has improved our fetal salvage.

#### PLACENTA PRAEVIA

My notes read: "Empty the uterus immediately if the diagnosis of placenta praevia is made. If it is marginal or partial in type, do this from below with rupture of the membranes and distension with a Voorhees' bag; then deliver the child by version or forceps. With central placenta praevia, do a cesarean section if the baby is alive; if the baby is dead and the cervix is dilated, do a Braxton-Hicks' version."

Dr. Williams,<sup>7</sup> in his last paper, written before his untimely death in 1947, outlined a treatment for placenta praevia which was different from his teaching 15 years prior. The dictum to always empty the uterus with praevia was temporized with that of an expectant attitude provided the infant was too small to survive and labor had not begun. Pelvic examination was often omitted in the examination and when thought to be necessary, it was done as gently as possible. The patient was kept under constant observation in the hospital or nearby, and no effort was made to deliver the infant until it was near term or excessive bleeding intervened.

We believe that all patients with bleeding in the third trimester of pregnancy should be admitted to the hospital. Immediately on admission, before any examination is made, blood is typed and cross matched, with 1000 cc. or more being made available. If the child is small and bleeding is not excessive, we carry out the expected treatment with the patient under observation. However, if the patient is near term, or bleeding profusely, she is immediately taken to the operating room where arrangements are made for a sterile pelvic examination to be followed by cesarean section, if necessary—the so-called two-way set up. If the pelvic examination reveals the cervix partially effaced, 2 to 3 centimeters dilated, and no central placenta praevia, the membranes are artificially ruptured with delivery anticipated from below. Should the placenta be completely over the internal os, or if the cervix is unfavorable for a short easy labor, immediate cesarean section is done.

We do not believe that version and extraction has any place today in the management of placenta praevia. The complications occurring from this pro-

cedure are too common to be ignored. Especially is this true when the lower uterine segment is occupied by the placenta, and the tissues have a consistency resembling wet blotting paper. Is it surprising, then, that rupture of the lower uterine segment or laceration and infection, either of which may cause death to the mother, occur frequently?

A word in regard to the place of version and extraction in present day obstetrics: Keetel and Crelock<sup>8</sup>, after a survey of this procedure at the University of Iowa Hospital over a 15 year period from 1936 to 1951, came to the conclusion that there was little indication except for (1) prolapse of the cord in a vertex presentation with complete cervical dilatation and the presenting part above the spine; and (2) a second twin presenting as a transverse.

Formerly we advocated version and extraction in face and brow presentation which could not be converted to occiput or chin anterior position. After several near maternal fatalities, including one ruptured uterus occurring in the hands of an experienced version operator, we no longer believe this is the proper procedure, and recommend instead cesarean section.

In a four year period from 1944 to 1948, there were 4,370 deliveries in the North Carolina Baptist Hospital with 22 versions, an incidence of 0.5 per cent. From 1949 to 1952, another four year period, there were 5,113 deliveries with 10 versions, an incidence of 0.17 per cent. Too many versions are done in our state by an operator who is not capable of performing cesarean sections and selects this formidable procedure as a method of delivery. This is well known by the fact that 20 maternal deaths have occurred in the past five years in North Carolina which are directly attributable to a rupture of the uterus following version and extraction. It is impossible to estimate how many patients have survived this procedure only to become gynecological cripples.

That the fetal mortality is definitely high in version and extraction is well demonstrated by a composite study from the New York Lying-In Hospital<sup>9</sup>, Cook County Hospital<sup>10</sup>, and Chicago Lying-In Hospital<sup>11</sup>, of fetal mortality in relation to the type of delivery. Among 68,857 viable deliveries there were 2,732 fetal deaths. Version and extraction was performed 536 times with 139 fetal deaths, an incidence of 26 per cent, which was the highest incidence for any type of delivery. Cesarean section of low cer-

vical or extraperitoneal type with the added protection of sulfonamides, antibiotics and blood is a much safer operation than it was 20 years ago both for the mother and child and should eliminate the use of version and extraction in the majority of obstetrical complications.

#### POSTPARTUM HEMORRHAGE

In the management of the third stage of labor, my notes read: "Following expulsion of the child, the uterus rises to above the umbilicus indicating the placenta has separated. A Crede maneuver (four fingers on the posterior surface of the fundus and the thumb on the anterior surface) is now done with gentle massage. If hemorrhage should occur right after childbirth, the maneuver is started at once. It is best to wait one hour longer for the placenta to separate before manual removal is performed. If a portion of the placenta is retained, watch the patient closely and do not invade the uterine cavity at once but trust it will be spontaneously expelled. In the case of severe bleeding after expulsion of the placenta, the patient should receive Pituitrin and ergot, shock must be treated and, if the bleeding is not controlled, pack the uterus."

We no longer teach or practice the Crede maneuver. Squeezing the uterus and exerting downward pressure often causes damage to the uterine musculature resulting in atony and hemorrhage, and often the products of conception are retained. It was common practice two decades ago never to invade the postpartum uterus except for hemorrhage. Today many of us remove the placenta manually if it has not spontaneously separated in 20 minutes or at any time if bleeding is excessive. Much blood can be lost during the waiting period and if not replaced the patient's resistance is lowered and infection is common. It is the purpose of manual removal to prevent this. We do not advocate this procedure in the hands of the inexperienced. With proper technique and aseptic precautions our morbidity has not been increased; we have saved blood and convalescence has been normal.

If a portion of the placenta has been or is thought to be retained, we do not hesitate to explore the uterine cavity immediately. Retention of products of conception invites infection and/or hemorrhage. The latter may be delayed for hours or days.

Excessive bleeding which occurs after expulsion of the placenta is best controlled by bimanual com-

pression of the uterus with one hand in the vagina and the other on the abdomen. This is well illustrated in Eastman's<sup>12</sup> recent edition of William's Obstetrics. In some cases placing the entire fist in the uterus and compressing with the other hand on the abdomen will aid the uterus to contract. Oxytocics are immediately administered. All blood lost in excess of 500 cc. should be replaced by transfusion. We have seldom found it necessary to pack the uterus, and agree with Cosgrove<sup>13</sup> that it is an unphysiological procedure.

The best treatment for hemorrhage is prophylactic, which begins during the prenatal period with proper care of anemia and diet. Slow delivery of the infant, as advocated by Dieckman<sup>14</sup>, is of definite value. Correct management of the third stage of labor will lower the incidence of hemorrhage. We recommend the Brandt-Andrew maneuver with the vaginal examination, as recommended by Leff. This has recently been well described and illustrated by Savage<sup>15</sup>.

#### HEART DISEASE

Dr. Williams said, "In general, the prognosis with heart disease is good as long as compensation is maintained and the myocardium is not severely damaged. Cardiacs, with the first delivery, do better if cesarean section is done. Cesarean section should also be done on those in failure, preferably under local anesthesia."

Authorities<sup>16,17</sup> now agree that cesarean section should never be done on a patient with cardiac disease except for an obstetrical indication. There is statistical evidence that emptying the uterus imposes a burden on the heart. More people die of congestive failure following cesarean section where work is excluded than after vaginal delivery. Hamilton and Thompson<sup>18</sup> found at the Boston Lying-In Hospital that the death rate was four times greater in abdominal than vaginal delivery. They also state that cardiac failure occurred seven times more often in abdominal than in vaginal delivery, and pulmonary embolism occurred twice as often. It has been shown that the cardiac burden definitely begins to rise about the fifth month of pregnancy with a normal lightening of the load during the last few weeks of pregnancy. This indicates that all surgery should be done before the fifth month. When the fifth month has been reached all efforts should be made to carry the patient to term, awaiting amelioration of the cardiac load in the last month and deliver the patient per vagina. In the past six years we have had 96

patients with cardiac disease in 8,490 deliveries, an incidence of slightly over one per cent. We have done no cesarean sections on this group. There have been two immediate deaths. One was morbid on admission and the other had congenital heart disease and died undelivered with a 32 weeks pregnancy because of sudden acute heart failure.

#### SUMMARY

No attempt has been made in this paper to discuss all the changes which have occurred in the management of obstetrical complications during the past 20 years. The control of infection with sulfonamides and antibiotics is familiar to all. Surgical complications have been omitted. Only heart disease is discussed among the medical complications. A brief attempt has been made to discuss some of the most common obstetrical complications, especially in regards to fetal and maternal mortality.

Little, if any, change is noted in the management of threatened abortion, ectopic pregnancy and toxemia. It is recommended that the Voorhees' bag be eliminated from obstetrics and that version and extraction be limited in its application. Expectant treatment should be carried out in placenta praevia and the uterus not emptied if the child is premature and bleeding is not excessive. The best treatment for post-partum hemorrhage is prophylactic. Excessive bleeding is best controlled by manual removal of the placenta, bimanual compression of the uterus and rarely uterine packing. Blood loss should always be replaced by transfusion. Cesarean section should not be done in cardiac patients except for an obstetrical indication.

These few changes we believe have helped to lower our fetal and maternal mortality and have proven beneficial to us.

#### REFERENCES

1. Colvin, E. D., Bartholomew, R. A., Grimes, W. H., and Fish, J. S.: Salvage Possibilities in Threatened Abortion, *Am. J. Obst. & Gynec.*, **59**: 1204, 1950.
2. Cosgrove, S. A., and Chesley, L. C.: The Management and Treatment of the Late Toxemia of Pregnancy, *The Bulletin of the Academy of Medicine, Toronto*, **19**: 4, January, 1946.
3. Brame, Dorothy D.: A Review of Eclampsia at the University of Virginia Hospital, *Virginia Medical Monthly*, December, 1935.
4. Thornton, W. N., Jr.: Personal Communications.
5. Mauzy, C. H. and Donnelly, James F.: The Induction of Premature Labor by Means of Pitocin in Patients with Toxemia of Pregnancy, *Am. J. Obst. & Gynec.*, **64**: 517, 1952.
6. Jackson, Richard L., and Decker, David S.: Pressor Effect of Intravenous Oxytocic, *Proc. Staff Meet., Mayo Clinic*, **28**: 20, 1953.
7. Williams, T. J.: The Expectant Management of Placenta Praevia, *Am. J. Obst. & Gynec.*, **55**: 169, 1948.
8. Keetel, W. C., and Crealock, F. W.: Place of Version and Extraction in Present Day Obstetrics, *J. Iowa M. Soc.*, **42**: 251, 1952.
9. Hillis, D. S., and Benensohn, S. J.: Infant Mortality at Cook County Hospital Among 16,000 Deliveries, *Am. J. Obst. & Gynec.*, **36**: 427, 1938.
10. D'Esopo, D. A., and Marchetti, A. A.: Causes of Fetal and Neonatal Mortality, *Am. J. Obst. & Gynec.*, **41**: 1, 1942.
11. Potter, Edith L., and Adair, F. L.: Clinical Pathological Study of the Infant and Fetal Mortality for an 18 Year Period at Chicago Lying-In Hospital, *Am. J. Obst. & Gynec.*, **45**: 1054.
12. Eastman, N. J.: *Williams Obstetrics*. Page 916, Appleton, Century, Croft, Inc., New York, 1950.
13. Cosgrove, S. A.: Hemorrhage and Its Management. *Southern Medical Journal*, **29**: 1219, 1936.
14. Dieckmann, W. J., Odell, L. D., Williger, V. M., Seski, Arthur G., and Pottinger, Russell: The Placental Stage and Postpartum Hemorrhage, *Am. J. Obst. & Gynec.*, **54**: 415, 1947.
15. Savage, J. E.: Management of the Third Stage of Labor. *Southern Medical Journal*, **46**: 379, 1953.
16. Gorenberg, Harold, and McGleary, John: Rheumatic Heart Disease in Pregnancy, *Am. J. Obst. & Gynec.*, **41**: 44, 1941.
17. Mendelson, C. L.: The Management of Delivery in Pregnancy Complicated by Serious Rheumatic Heart Disease, *Am. J. Obst. & Gynec.*, **48**: 329, 1944.
18. Hamilton and Thomason: *The Heart in Pregnancy and the Childbearing Age*. Williams & Wilkins Company, Baltimore, 1942.



## REPORT OF 700 CASES OF IRRITABLE COLON IN PRIVATE PRACTICE\*

ROBERT M. MISKIMON, M.D.,†  
Richmond, Virginia

My favorite teacher, Herbert F. West, of Dartmouth College, in the preface to his newest book, "Rebel Thought", wrote, "At Harvard University, as a graduate student, I was unable to write a single sentence that was my own, as every statement had to be backed by some authority or pedant, and, although this might be good enough for a master's thesis or even a doctor of philosophy's dissertation, it did little or nothing to advance my own intellectual progress . . .". Such is the way I feel about the majority of references in medical articles. There must be a room in the vast house of medical knowledge for an individual's observations and opinions without their having to be presented as in accord with or contrary to leading authorities. Let me warn you that if this paper needs more authority than the author can give it, it will have to go begging.

I wish to bring out in this paper, but not statistically, some of the things which I have learned from treating in private practice 700 individuals (not cases), each of whom had the irritable colon syndrome. I know of no condition which requires of the physician as much patience, time, understanding and courage—courage to stick by medical therapy, and courage to repeatedly and continually deny the patient's inevitable belief that he or she has something requiring surgery. Too many of these patients have been operated on already.

I have become concerned over the attitude on the part of some of our profession toward these patients and over their approach to this condition. I have heard all I wish to hear about these individuals having strong neurotic tendencies. That approach harms both the patient and the medical profession.

That is the attitude which makes the medical student turn the page, the intern turn to a psychiatric consultation, the resident turn up his nose, the practitioner turn to his next patient, the patient turn to a charlatan, and the charlatan turn to his calcium gluconate and parenteral estrogen. Once that ap-

proach has been decided upon, no further thinking from the patient's standpoint is possible, and the patient's symptoms are reduced to a list of complaints about which the doctor feels little responsibility. Consequently, the doctor goes about his profession in a sure and certain way since he has been able to reduce what should be disturbing and of concern to him to a bizarre situation of the neurotic's making. Thus the patient goes about his duties with the same complaints, the same fears, and the same disability he had when he first presented himself for help.

There are two ways in which individuals with the irritable colon syndroms have suffered at the hands of the medical profession. The first is by way of the aforementioned approach to them on the part of many doctors. The second is by way of mistaken diagnosis and, therefore, incorrect treatment.

Individuals in this group had been previously diagnosed as having cholecystitis, with or without cholelithiasis, chronic appendicitis, diverticulosis, diverticulitis, coronary insufficiency, pancreatitis, ovarian cyst, salpingitis, hepatitis, biliousness, "intestinal fermentation", "autointoxication", pericolic bands, adhesions, "locked bowels", nervous stomach, and peptic ulcer. Some were told that they were threatened with an ulcer, or that there was an ulcer, but that it was not demonstrable on X-ray. One man was told thirty-five years ago that he was threatened with an ulcer. His difficulty has continued and he has yet to develop a demonstrable ulcer or to develop an ulcer-like symptom complex.

Patients had received many types of medical and surgical treatment. Previous operations included cholecystectomy, appendectomy, gynecologic procedures, gastric operations, exploratory operations, and operative procedures to release adhesions and to cut pericolic bands. One lady has had adhesions released four times. Regardless of the type of treatment each patient whose treatment included bed rest was better after treatment, only to have the same old difficulty come back at some time after resuming activity.

I have read and have been told that these indi-

†Director, Employees' Medical Service, City of Richmond; Medical Director, Southern Biscuit Company, and Medical Consultant, Reynolds Metals Company, Richmond, Va.

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.

viduals frequently are concerned because they feel that some evacuations are incomplete. When I have read and heard this I have inferred a strong implication that the patient is something more than neurotic to be so concerned. Let us face it. It is a well-recognized phenomenon that distention of the descending colon, sigmoid, and rectum, be they distended by fecal material or by absorbent cotton, causes the unpleasant symptoms of lassitude, apathy, irritability, anorexia, and headache. People who suffer from an irritable colon often do have incomplete emptying. Therefore, they are entitled to some concern over a situation which they know from the past will cause discomfort or pain. In the case of functional disease, as doctors, we cannot listen to only the complaints, which are important to us, but rather we must concern ourselves with what are the complaints which bother the patient. I have long since parted company with one of my medical school professors who told us that when a patient brings in a written list of complaints we could be sure that here was truly a well, but neurotic patient. To do that is to accept the individual neither as a human being nor as a patient. If complaints are severe enough for a rational person to write them, then no matter how we feel about them, we must see these people with the responsibility and concern which comes of placing ourselves in the patient's predicament. We can do nothing less. In this alone do we have the power to keep many thousands of patients away from quacks, unrecognized spas and the colonic irrigators.

I do not see these people as the neurotic, bowel-conscious and helpless individuals I have heard them described as being. I see them as the perfectionistic, driving, accomplishing, striving individuals so typical of America, though I will readily admit that often the striving is pointless and that their anxiety over a small failure is seen out of all proper perspective. Being perfectionistic and of a striving nature, very often they are totally incapable of focusing on the 98% which is perfect, but only on the 2% which is imperfect. This desire to do well or the fear of failing causes gastro-intestinal contractions, and this must be very common because all stage fright is felt in the epigastric region. Daily we use the expressions "intestinal fortitude", "stomach for it", and "guts". The ancient Greeks believed that the seat of the emotions was in the epigastrium.

Although these patients were this type of indi-

vidual their difficulty appeared to be precipitated always by another of many stresses and strains being added to an already harassed and harried person. Moving the place of residence, a new baby, or a difficult visiting relative were often the final straws on the camel.

I mentioned my interest in this subject to a well-trained psychiatrist, and he reminded me of what I have heard many times—that the miser is a constipated man. I find it impossible to dismiss these 700 human beings with a wave of the arm, and the rather childish idea that as King Midas fingered his gold, so did his colon hoard feces, and, by constant miserly fingering, roll his feces into small pellets. In the first place, I cannot answer for the misers of history, but none of the constipated people in this group wanted their feces hoarded. In the second place, I have found irritable colons in very generous people. In the third place, there should be no place in the practice of medicine for any idea which so neatly dismisses peoples' complaints, and so completely clamps the lid on future thinking.

This, I have been told, is a disorder of civilization. Rather, I believe, is it a result of the frontier feeling plus the democratic belief that anyone can be president if he strives hard enough. I am sure that the reason for its low incidence among primitive people is because of their resignation to an established order of society. We begin almost at infancy to train our children in the competitive and striving way. Many an irritable colon was begun by the effect on a child of the daily elementary school drilling of that motto in large gold letters in the chapel—"Good, better, best, never let it rest, 'til your good is better, and your better best". We have no place in our working society for the happy man—or rather for the man who can say, "I have done all I feel like doing today—I am happy—the Hell with that extra ten dollars".

I cannot believe, as I know it is generally believed, that this condition results from the taking of laxatives and enemas. The majority of these patients did not take laxatives, and half of them did not have any bowel habit complaints. The idea of it being due to irritation is left over from the days when it was considered an inflammation of the colon. These patients showed no evidence of irritation, or of inflammation. They suffered from what appeared to be disturbed function due to autonomic imbalance, and they exhibited much other evidence of autonomic

imbalance such as hyperhidrosis, easy flushing, cold hands, hypotension, and bradycardia. As more is learned of the disturbance in physiologic chemistry caused by emotional and personality factors, we may learn that this dysfunction can be chemically or hormonally corrected.

There are not different types of this, at least not among these patients, but rather different phases of the same condition. The amount of mucus, the type of stool, and the type of pain were ever changing factors in any one individual. Therefore, I find it hard to categorize these patients into types based on percentage of mucus production. In fact that would be truly pseudo-scientific.

I have been impressed also with the fact that none of these individuals had merely an irritable colon. All had evidence of other gastro-intestinal irritability, and many of a generalized individual irritability. It is of interest here that all of these patients exhibited a delayed cardiac sphincter opening time and many suffered ulcer-like and food-relieved pains with and without pylorospasms. Globus hystericus was a common complaint among these people—in some, the presenting complaint.

Much has been written about diarrhea in this type of individual. All of these patients received relief from their treatment, whether they had diarrhea, constipation, or no bowel complaints, and in all the treatment was identical. Enemas taken during bouts of diarrhea produced hard, scybalous pellets, so I am forced into the belief that their diarrhea resulted from there not being sufficient colonic mucus membrane with which the more recent fecal material could come in contact, resulting in insufficient water absorption to prevent diarrhea, and that the amount of available colonic mucous membrane was decreased by the presence of adherent pellets. Enemas resulted in a cessation of diarrhea in all of the patients who had it.

The patients included in this survey were hard working men, busy house-wives, or women who tried to have both a career and a family. They had suffered for months or years before seeking medical advice. The presenting symptom was usually abdominal pain. The pain was either a dull sensation of fullness or sharp colicky pain anywhere along the colon, but most frequently at the flexures and in the region of the sigmoid. The pain was intermittent, and often between episodes of severe trouble the patients were completely free of symptoms, only to

have a recurrence after inadequate rest, excessive work, emotional stress and strain, or a combination thereof. Some patients were wakened at night by their pain. Some could trace the beginning of their trouble to childhood. All felt emotionally unstable, and more irritable after a recurrence had begun. There was not a constancy about bowel complaints in these patients, either as a group, or as an individual. Some had diarrhea, some had constipation, some had regular and normal evacuation of scybalous stools, and some had no bowel complaints at all. The majority described ever changing bowel activity and stool characteristics. A few individuals had no abdominal pain and had no bowel complaints. In these individuals the presenting symptom was irritability and instability, and all of these individuals had stools characteristic of this condition, but did not realize that there was any abnormality present.

All described what they considered to be excessive gas production, and a rapidly changing waist measurement. I have observed a 3½ inch difference in girth in 24 hours on one patient. No patient noticed this change in abdominal fullness during trouble-free periods.

All female patients had exacerbations at the time of their menstrual periods, and at the time of the menopause. Frequency and urgency were commonly associated symptoms in the female patients. Many patients had back pain, but this also was more common among the females. There were often various types of sexual difficulties present, impotence, frigidity and dyspareunia being the most common, but most patients had a disappearance of these complaints when their episode of colonic difficulty was over.

The vast majority of these patients suffered anorexia and weight loss. Most patients' pain was aggravated by eating, and particularly after eating onions, garlic, hot seasonings, and greasy fried foods. Those patients who had an associated ulcer-like syndrome, with or without pylorospasms, were relieved by eating. Cancerophobia was universal, easy fatigue the rule.

The most important historical information next to the type of abdominal pain is found in the bathroom experiences of these individuals. During periods of trouble it was useless for them to go to the bathroom unless they felt a strong urge to do so, because otherwise they would spend unsuccessful and frustrating minutes, hoping and straining. When



the urge was sufficient to warrant a try, one of many things happened, and all individuals who had bowel complaints ran the gamut of these changing happenings. Sometimes a small amount of flatus was passed with complete loss of the previous urge. Usually, however, a few, small, hard pellets were passed and, although the individual felt full, and in need of more evacuation, none occurred. These patients then felt that this evacuation was inadequate, and their feeling in the matter was proven to be correct by the fact that a small (200 c.c.) plain warm water enema produced 10-30 more pellets. The returning water was perfectly clear, indicating that the water had not gone much beyond the sigmoid, and that the sigmoid, therefore, contained 10-30 hard pellets of stool.

On other occasions these patients would pass pencil, or ribbon stools. At other times the stool was large, and looked like a three dimensional jig saw puzzle, made up of many pellets of varying shades of normal stool color, pressed together, and fitted to make a mosaic-like cylindrical mass. This usually became homogeneous toward the tail, of smaller diameter, and of softer consistency.

A composite portrayal of these patients would show an active, quick, friendly, perfectionistic individual, who would be ahead of time for the appointment, who would be exceptionally well-groomed, who would have necktie ends the proper length, yet who would have the concerned expression of a person who was resigned to a fate of pain and discomfort or worse. The vital signs would be normal. The patient would be of any body build. The reflexes would be exaggerated, and the palms and axillae moist, about which the patient would apologize. The opening time of the cardiac sphincter would be above 30 seconds. The abdomen would be tender everywhere until care had been taken to gain the patient's abdominal confidence. Then there would be tenderness in any quadrant, but always along the route of the colon. Tenderness of an identical nature would probably be elicited in more than one place. In each tender area the colon would be palpable as a contracted, hard tube about  $\frac{3}{4}$ " in diameter. With care it would be discovered that the only tender structure was the contracted colon. Rectal examination would reveal nothing except very tight sphincters.

In none of these individuals did the laboratory indicate any inflammation. There was frequently an anemia, caused, I presume, by either disturbed

absorption, or by decreased intake. The stools were blood-free. What X-rays were done revealed the usual radiographic picture of this syndrome. I believe it imperative that these patients not be submitted to the long, involved, expensive and often unnecessary work-up to which so many of them have been submitted.

The therapeutic regimen which effected the greatest improvement evolved through successes and failures on my part with these individuals. I have been convinced that the most important single factor in treating these people is a full and detailed explanation by the physician of the condition, and of what he hopes to accomplish. It is wise to spend enough time, usually an hour, to do this in such a way that the patient does not leave believing still that there is a cancer present, or that "It's all nerves", for to the average patient that is the same as saying that all of the complaints are completely imaginary.

It is important for the patient to understand why he or she should do each thing suggested by the physician, and how each will help the condition now already understood by the patient. In this discussion it is imperative that the patient be shown a more relaxed approach to life, with less emphasis on striving foolishly, and that the patient's stress-causing problems be reduced to their proper size. Warn each patient of the recurrent nature of this condition, and warn against impatience, and its resultant search for what seems to be more definitive therapy. It often became necessary to discuss the whole problem with members of the family, occasionally with business associates.

I have found it helpful not to ask about the patient's stool characteristics, but to wait until after the examination was finished, and then to preface the above-described explanation with a description to the patient of his own stool characteristics. It served to convince the patient that the suggested therapy was based on an understanding of the condition, and allayed the patient's fear that here again was a physician who would reduce real dysfunction to "nerves".

Equally important in the plan of treatment is adequate rest. I got best results by starting these individuals on two hours more sleep each night than they thought they needed. It is important that working men have a rest period before their evening meal. Those patients for whom alcohol caused no aggravation had a cocktail or two before dinner, both to

delay dinner, and as a relaxing agent. Because of the never ending quality of housework, housewives were advised to create their own end points, either by striving for less degree of perfection, or by declaring a certain hour to be theirs each day, and to spend that hour in some way which the average housewife of this group would think a selfish way—pursuing a hobby, or resting.

It became apparent with these patients that there was no need for a diet as long as each individual avoided the foods which caused distress. Coffee and tobacco were restricted in every case.

The only combination of drugs which proved to be of continued help was Belladonal, a mixture of phenobarbital and the levorotatory alkaloids of belladonna. All of the synthetic antispasmodics, and most of the barbiturate-belladonna mixtures on the market were tried. None was as efficacious as Belladonal. All patients were relieved by Belladonal, and, in all, the preparation brought about gastrointestinal relaxation without the necessity of its being pushed to the point of visual symptoms or of dryness. I feel that the reason for this is the fact that Belladonal contains a greater amount of the levorotatory alkaloids of belladonna than any of the others.

Methylcellulose was used in the earlier patients, but was abandoned for these reasons:

1. Most patients felt an increase in abdominal discomfort while taking it.
2. Many patients complained of large putty-like stool masses, which were difficult to pass, and
3. 'These patients' stools returned to normal without any bulk producing agent. Therefore, I find it hard to believe that such an agent is needed.

Each patient was asked to take a small warm water enema at the beginning of their treatment. Each was advised to take another enema on the

second day of pellet-like stools. The majority of these patients have taken 1-2 enemas. None have needed more than an occasional one at the time of exacerbations. In none did the enema appear to cause any irritation.

Exercise was restricted during attacks because it was an almost universal observation on the part of these patients that exercise during an attack aggravated the condition.

Finally, one of the most important factors in treating this condition, I believe, is to get the patient out of the physician's hands as soon as possible. Most of these patients were seen three or less times. It is essential that they leave the office with enough understanding to treat themselves, to treat exacerbations and to prepare for trouble when something which might cause stress and strain appears on the horizon. Any additional advice needed can be given over the telephone. Only by such thorough understanding can the patient be ready to care for a condition which will be intermittently present for the length of time that this condition is usually present.

In conclusion, I wish to point out that here is a condition which challenges us, as physicians. Here is a disorder which requires skill, knowledge, ingenuity, and time not required by the majority of medical conditions. Here is an opportunity for the doctor to become a physician. Here is a chance for us to fight the quack and the charlatan in the way they should be fought—with the art, as well as the science of medicine as our weapons.

#### SUMMARY

Personal observations on the diagnosis and treatment of the irritable colon syndrome have been presented.

- 6710 Dartmouth Avenue.

---

## RECENT THERAPEUTIC AGENTS IN THE TREATMENT OF ANEMIA, WITH SPECIAL REFERENCE TO VITAMIN B-12\*

THOMAS W. GREEN, M.D.,  
Bristol, Tennessee

Several important drugs have been introduced in the last few years for the treatment of anemias. These are vitamin B-12, folic acid, cobalt, ACTH, cortisone, and saccharated iron oxide. It is the purpose of this paper to review briefly the use of these drugs, particularly as they apply to the general practice of medicine.

### VITAMIN B-12

In 1926 Minot and Murphy<sup>1</sup> discovered liver therapy for pernicious anemia. Since then, investigation has continued in an attempt to find the factor in liver responsible for its therapeutic properties. Research was hampered by the lack of a suitable experimental animal as man was the only one who developed pernicious anemia. In this country Shorb<sup>2</sup> in 1947 found that liver extract was necessary for the growth of certain bacteria in culture media. This discovery subsequently led to the isolation of vitamin B-12 by Rickes *et al.* in 1948<sup>3</sup>, using this microbiological method of assay. At approximately the same time Smith<sup>4</sup> in England isolated a red material by partition chromatography, subsequently identified as vitamin B-12. It is of interest that this discovery was made almost simultaneously in both countries, in one by partition chromatography, and in the other by a microbiological method. West<sup>5</sup> found that vitamin B-12 was effective treatment for pernicious anemia in relapse. At the present time it is felt by most authorities that vitamin B-12 is the anti-pernicious anemia factor present in liver. Castle<sup>6</sup> has modified his previous theory concerning pernicious anemia as follows: vitamin B-12 is presently thought to be the so-called "extrinsic factor", and "intrinsic factor" present in the secretion of the stomach is necessary for the absorption of vitamin B-12 from the intestinal tract. Pernicious anemia is considered to be the clinical result of a deficiency of vitamin B-12. This deficiency is predominantly due to a lack of gastric secretion, itself usually a manifestation of heredity predisposition and advancing age.

Owren<sup>7</sup> and others<sup>8</sup> have cast doubt as to whether vitamin B-12 is as complete replacement therapy for pernicious anemia as liver. They found persistent

macrocytosis and abnormal prothrombin concentrations in the blood of patients maintained on vitamin B-12. In 1948 the pernicious anemia patients of the Hematology Clinic at the Johns Hopkins Hospital were changed from liver therapy to vitamin B-12. In 1952 we published the results of this study of prolonged treatment of pernicious anemia with vitamin B-12<sup>9</sup>. A large group of patients with pernicious anemia had been maintained on vitamin B-12 alone for periods up to forty months. All of these patients remained as well on vitamin B-12 as on previous liver therapy. There were no hematological or neurological relapses. At the end of this study indices, smears, and prothrombin times were performed. No significant macrocytosis or abnormality of prothrombin concentration was found.

It was our opinion that vitamin B-12 was as effective as liver extract for producing and maintaining remissions in pernicious anemia. No evidence was obtained that anything other than vitamin B-12 was necessary. It had the distinct advantages over liver of absence of discomfort at the site of local injection, cheapness, assay by weight, and absence of allergic reactions which occurred in 20% of our cases at one time or another during previous treatment with liver.

It was found that the approximate parenteral dose of vitamin B-12 needed for maintenance therapy in pernicious anemia was 1 microgram per day, corresponding to one unit of liver per day. Patients who had obtained maximal neurological and hematological improvement were maintained in our clinic on 45 micrograms every six weeks. Larger doses were tried in cases with severe neurological changes without any demonstrable advantage over the above dosage. Initially, large doses, such as 30 micrograms twice a week, were often used until maximal clinical and hematological improvement occurred. A few patients were maintained on 150 micrograms every five to six months and apparently fared as well as the others. It was found with patients in relapse that the effective oral dose was approximately 100 times the intramuscular dose. If vitamin B-12 continues to be produced cheaply, adequate oral therapy

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.



may be possible in the future. However, in view of the data presently available it is felt that only parenteral therapy should be used with the exception of those engaged in research on this problem. Many claims as to the value of vitamin B-12 therapy in other diseases, such as osteo-arthritis, lupus erythematosus, trigeminal neuralgia, diabetic neuritis, herpes zoster, etc., have been made. However, it is beyond the scope of this paper to discuss the use of this material in these diseases.

#### SACCHARATED IRON OXIDE

Saccharated iron oxide under the trade name of Feojectin, has been in use for the last five years<sup>10</sup>. This is the first effective parenteral iron that has been available, previous forms having either contained too little iron to be of value or were too toxic. However, its use should be greatly limited because only a rare patient with iron deficiency anemia needs parenteral iron. The vast majority of such patients respond satisfactorily to oral iron therapy. The body has no mechanism for ridding itself of iron except by the shedding of red cells. There is real danger of producing hemochromatosis by excessive parenteral iron. The indications for its administration are few. Ulcerative colitis and other gastro-intestinal diseases in which iron by the oral route would be contraindicated are the most frequent requirements for this drug. A rare case of iron deficiency anemia refractory to oral therapy may respond to parenteral iron. It may be needed in a rare case of iron deficiency anemia with pregnancy when oral iron is not tolerated. This material is expensive and when given intravenously, may cause alarming side reactions, and is a severe local irritant when extravasated. The dosage necessary in a given case may be calculated by a formula, and only the amount required to correct the deficiency should be injected. This formula is the hemoglobin deficit (normal hemoglobin—initial hemoglobin)  $\times .255 =$  amount of parenteral iron needed in gms. This is a valuable new addition to our therapeutic armamentarium for use in the treatment of iron deficiency anemias when used correctly in properly selected cases.

#### FOLIC ACID

Folic acid has been used in recent years in the treatment of anemias. There are only a few well recognized folic acid deficiency states. These include some cases of sprue, nutritional macrocytic anemia, "pernicious megaloblastic anemia" of pregnancy,

megaloblastic anemia of infancy, and some cases of megaloblastic intestinal "stricture" anemia. Patients with these diseases may respond to folic acid and not to liver or vitamin B-12. However, these conditions are so uncommon that they will rarely be encountered by the general practitioner. Folic acid can produce a hemopoietic response in pernicious anemia but does not protect the nervous system; therefore, it is contraindicated in this disease. On the other hand, folic acid has been incorporated into many of the multivitamin preparations now on the market. Conley and Krevans<sup>11</sup> have recently written that enough folic acid may be present in these vitamin capsules to relieve the anemia of pernicious anemia while the neurological disease may progress. They reported five cases of pernicious anemia seen by them with little or no anemia, and severe subacute combined degeneration of the spinal cord. These patients had received folic acid in multivitamin capsules, inadvertently prescribed in some of these cases by their physicians. It is felt that the practitioner should not prescribe such multivitamin preparations until he has at least assured himself that the patient does not suffer from pernicious anemia. Actually there is no reason for the inclusion of folic acid in such vitamin capsules in view of the danger of masking pernicious anemia and the rarity of true folic acid deficiency states. Probably folic acid should be restricted for use only in a pure form in the above indications. The dose used in the treatment of folic acid deficiencies is from 10-30 mgms. per day orally.

#### COBALT

Cobalt therapy has recently been recommended for the treatment of anemias of infection, anemia of chronic renal disease with uremia, and other conditions. However, the evidence is not complete that cobalt is of value in these diseases, either alone or in combination with other agents<sup>11</sup>.

#### CORTISONE AND ACTH

Cortisone and ACTH have produced occasional remissions in cases of acquired hemolytic anemia. A rare case of aplastic anemia has responded to these drugs.

#### DISCUSSION

The well established principle of specific therapy for specific anemia still holds. Hardly a day passes that some drug salesman does not enter my office with a capsule containing liver, B-12, folic acid, and

iron. Because of the rarity of true folic acid deficiency states and the danger of their use in unrecognized pernicious anemia, there is no need for the inclusion of folic acid in these capsules. B-12 or liver therapy in pernicious anemia should be given only by the parenteral route according to our present knowledge. Both are effective and nothing else is needed in cases of pernicious anemia and other related megaloblastic anemias that respond to these agents. Specific oral therapy with ferrous sulfate or ferrous gluconate is cheap and all that is necessary for the treatment of iron deficiency anemias that make up the majority of cases of anemia encountered in general practice. In no other forms of anemia, such as aplastic, myelophthistic, hemolytic, etc., is the administration of any of these agents justified. Oral iron over a period of time in refractory anemia has recently been reported as causing hemochromatosis<sup>12</sup>.

In closing, I would like to quote from a recent editorial by Wintrobe in the *American Journal of Medicine*, entitled, "Shotgun Antianemia Therapy"<sup>13</sup>: "There is no justification for indiscriminate medication and such a practice is obviously dangerous as well as unsatisfactory. There certainly is no need for symbolism or for mysticism. Yet, under the cover of euphonious names, the sales of these nostrums—the present day successors of the patent medicines of yesterday—total in the millions. It is implied that some mysterious beneficial effect will result from their use and that a subtle, ever present nutritional deficiency will be corrected. The valuable confirmation of the diagnosis which can be derived from the response to the specific therapeutic agent is lost while the cost of the antianemic therapy is multiplied ten or twenty-fold."

#### SUMMARY

Recently introduced drugs for treatment of anemias have been reviewed and their indications and uses defined. Specific therapy for anemia is still most advisable. "Shotgun Antianemia Therapy" has no place in the rational management of anemias.

#### BIBLIOGRAPHY

1. Minot, G. R., and Murphy, W. P.: Treatment of Pernicious Anemia by a Special Diet. *J. Am. Med. Assoc.*, **87**: 470, 1926.
2. Shorb, M. S.: Unidentified Essential Growth Factors for *Lactobacillus Lactis* Found in Refined Liver Extract and Certain Natural Materials. *J. Bact.*, **53**: 669, 1947.
3. Rickes, E. L., Brink, N. G., Koniuszy, F. R., Wood, T. R., and Folkers, K.: Crystalline Vitamin B-12, *Science*, **107**: 396, 1948.
4. Smith, E. L.: Purification of Anti-Pernicious Anemia Factors from Liver. *Nature, London*, **161**: 638, 1948.
5. West, R.: Activity of Vitamin B-12 in Addisonian Pernicious Anemia. *Science*, **107**: 398, 1948.
6. Castle, W. B.: Present Status of the Etiology of Pernicious Anemia. *Ann. Int. Med.*, **34**: 1093, 1951.
7. Owren, P. A.: The Deficiency of a Factor Necessary for Normal Protein Synthesis in the Liver in Pernicious Anemia. p. 34. *Proceedings of the Third International Congress of the International Society of Hematology*, Grune and Stratton, New York, 1951.
8. Beard, M. F., and McIlvaine, S. K.: Vitamin B-12 As a Hemotherapeutic Agent in Pernicious Anemia. *Proceedings of the Third International Congress of the International Society of Hematology*. p. 34, Grune and Stratton, New York, 1951.
9. Conley, C. L., Green, T. W., Hartmann, R. C., and Krevans, J. R.: Prolonged Treatment of Pernicious Anemia with Vitamin B-12. *Am. J. Med.*, **13**: 284, 1952.
10. Brown, E. B., Moore, C. V., Reynfarge, C., and Smith, D. E.: Intravenously Administered Saccharated Iron Oxide in the Treatment of Hypochromic Anemia. *J. Am. Med. Assoc.*, **144**: 1084, 1950.
11. Conley, C. L., and Krevans, J. R.: Development of Neurologic Manifestations of Pernicious Anemia During Multivitamin Therapy. *New Eng. J. Med.*, **245**: 529, 1951.
12. Wallerstein, R. O., and Robbins, S. L.: Hemochromatosis After Prolonged Oral Iron Therapy in a Patient with Chronic Hemolytic Anemia. *Am. J. Med.*, **14**: 256, 1953.
13. Wintrobe, M. M.: Editorial—Shotgun Antianemia Therapy. *Am. J. Med.*, **15**: 141, 1953.

*Suite 2-H, Doctors Building.*

## A REVIEW OF RECENT ADVANCES IN RADICAL PELVIC SURGERY—

## Report of Three Cases\*

JOHN L. HARRIS, JR., M.D.,  
HUGH H. TROUT, JR., M.D.,  
HORACE A. ALBERTSON, M.D.,  
and  
ALFRED P. JONES, M.D.,  
Roanoke, Virginia

Radical pelvic surgery reached a new peak with the report in 1948 of three cases by Brunschwig<sup>1</sup> in which he described an operation devised for the total excision of all pelvic viscera in mass for advanced carcinoma. His technique was that of a one stage abdomino-perineal operation with end colostomy and bilateral ureteral implantations to the colon above the colostomy. The main conclusion at that time was that the operation was compatible with normal physiological activity.

In 1949 Brunschwig and Walsh<sup>2</sup> reported block dissection of pelvic neoplastic tissue with the loss of the lower segment of the right common ileac vein, a great portion of the external ileac vein, and the hypogastric vein and its branches with only mild post-occlusion swelling which did not effect or delay the subsequent ambulation.

Bladder substitution was described by Bricker<sup>3</sup> following the above described radical pelvic surgery in which, due to the location of malignant tissue, the bladder had to be sacrificed. His suggested methods included: 1. Bilateral ureteral anastomosis to an isolated section of colon. 2. The use of isolated cecum as a reservoir with ureteral anastomosis and cecostomy for drainage to the outside. 3. Ureteral transplantation to the cecum (which served as a reservoir) and the use of terminal ileum for drainage to the outside, and, 4. Ureteral anastomosis to a segment of isolated ileum and an ileo-ileostomy performed to complete the continuity of the G.I. tract.

Again, in 1950, Brunschwig, *et al.*,<sup>4</sup> reported on radical surgery for carcinoma of the female genitals with bladder invasion but without involvement of the rectum. Here he advocated a total vaginectomy, total cystectomy, total hysterectomy, removal of all pelvic lymph nodes and bilateral ureteral implantation into the intact sigmoid colon. At this time in

his report, which included 36 cases, he states that he had an overall mortality rate of 22% of operations performed.

Burt<sup>5</sup> reported a case of unassociated carcinoma of the rectum and carcinoma of the prostate. His procedure consisted of abdomino-perineal resection of the rectum, removal of the bladder, prostate and external genitalia en mass and bilateral anastomosis of the ureters into the sigmoid colon which was brought through a left rectus splitting incision as a sigmoidostomy just below the umbilicus.

The role of radiation therapy in conjunction with radical surgery for uterine carcinoma is discussed by Payne<sup>6</sup> who feels that surgery with complimentary radiation has increased the surgical survival rate in cases of corpus cancer. He also states that in cases of cervical carcinoma, primary radiation by external and local approaches remains the keystone of therapy, while the supplementary use of surgery has certain limited indications. He feels that for the present it is not wise nor humane to abandon the proved for the dramatic and unproved treatment measures.

Pre-operative artificially induced progestational state has been described by Cromer, *et al.*,<sup>7</sup> as facilitating surgery and reducing post-operative complications. This has been accomplished by the administration of large doses of progesterone pre-operatively. In 75% of the cases reported, which was 12 out of the 18, there was a varying degree of gross changes in the organs and tissues of the pelvis. These changes were not unlike those of early pregnancy, namely: 1. Increased vascularity of the organs of the pelvis. 2. Edema of the subperitoneal areola connective tissue which enhances the dissectors plane of cleavage, and, 3. Increased uterine and uterine ligament mobility. Cromer did feel though that the degree of response was subject to dosage, age, and the manner and method of previous irradiation.

From the Department of Surgery, Jefferson Hospital, Roanoke, Virginia.

\*Read before the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953.



Pierce<sup>8</sup> from Brunschwig's Clinic reports that they select their cases for surgery, taking into consideration coronary disease, hypertension, obesity, psychoses, malnutrition, etc. She feels that in the past her operative mortality rate had been pushed to a maximum by having disregarded such conditions. "In the early group of cases we occasionally proceed with exenteration in spite of perio-aortic nodes, knowing that we were leaving disease behind because those patients were either radiation failures or in extreme pain." In recent years it has been her policy not to proceed with an exenteration unless she was reasonably sure the gross cancer had been circumvented.

There have been three cases of radical pelvic surgery performed at the Jefferson Hospital in Roanoke, Virginia, since 1951. Each of these three were selected cases.

*Case I.* Mrs. B.W.T., a 36 year old white female, came to the hospital on 9-5-52 complaining of severe pelvic pain. The patient stated that she had had no symptoms until her present illness which began two weeks prior to admission with onset of pelvic pain, lower abdominal pressure, and low backache.

Physical examination was essentially negative except for the pelvic examination. There was a mass in the posterior vaginal fornix which seemed to be about 3 cm. in diameter and attached to the rectum. A biopsy was taken and this mass was reported as epidermoid carcinoma. The seriousness of the contemplated procedure was discussed with the patient. At operation on 9-8-52 there was no evidence of distant metastases. It was felt at this time the rectum could not be saved safely and it was decided to perform a total hysterectomy, removal of vagina, and abdominal-perineal resection of the rectum. The abdominal operation included appendectomy and bloc freeing of uterus, both ovaries, tubes, and freeing up of the rectum and the formation of a colostomy. The perineal portion consisted of removing this mass along with all of the vagina except a rim of tissue around the urethral opening. The patient at the end of the operation was in mild shock although she received 4 pints of blood in the operating room and had been prepared with 5 pints pre-operatively. She was discharged on the 22nd hospital day with a colostomy functioning properly, and her perineal wound healing nicely.

The patient was last seen several weeks ago and is entirely free of pain and there is no evidence of

any residual malignancy. She is happy with the results of her operation.

*Case II.* Mrs. L.R.H.,<sup>9</sup> a 47 year old white female, was admitted to the Jefferson Hospital March 3, 1951, with a complaint of cramping pains in the lower abdomen of 18 months' duration. These symptoms had started about two months following a supravaginal hysterectomy for myomata uteri and had been progressively more severe. During the six months prior to admission she had had almost constant abdominal pain which had become increasingly severe and had required daily narcotics for relief of pain. Increasing dosages of narcotics had been taken, and it was thought by the referring physician that the patient was an addict at the time of admission.

Physical examination revealed moderate abdominal distention with intestinal patterns easily visible and marked voluntary muscle spasm throughout the lower abdomen. No definite mass was found on abdominal examination. On pelvic examinations, however, a hard, fixed, firm mass was found which had replaced the cervix and was extending slightly into the broad ligaments and superiorly into the floor of the bladder. Sigmoidoscopic and x-ray examinations were not satisfactory due to poor cooperation of the patient, but there was evidence of a partial obstruction in the sigmoid with marked dilatation of the small intestine. She was placed on sulfathaladine by mouth as preparation for colon resection, and two days before operation on streptomycin.

On March 9, 1951, the pelvis was explored. A hard carcinoma of the cervix was found which had invaded the urinary bladder and there was direct extension to the mid portion of the sigmoid which was attached in this area and also one loop of ileum which was almost completely obstructed. The ileum and sigmoid were each resected. The left ureter was tremendously dilated and both the left and right ureters went into the mass. It was necessary to transplant both ureters into the rectosigmoid below the sigmoid anastomosis. The lower 2-inches of each ureter was then removed along with the bladder, cervix, and what remained of the round and broad ligaments and pelvic peritoneum. No evidence of remaining malignancy was present grossly.

The patient was discharged on her 28th hospital day in an improved condition. She returned to the hospital on February 1, 1952, with complaint of vaginal bleeding. There had been a weight gain of

50 pounds since surgery. Appetite had been excellent and she exhibited no difficulty in urinary control. Pelvic examination showed a little irregularity in the anterior wall of the shortened vagina. There were a few tiny non-visualized nodules which were difficult to decide whether they were recurrence of malignancy or unsatisfactory wound healing. The impression was possible recurrent carcinoma. Radium was placed into the vagina and she received 100 mg. of radium for 30 hours. She was discharged on February 4, 1952.

In October 1953, the patient was reported to be doing very well by her family physician.

*Case III.* Mrs. R.A.W.S., a 33 year old white female, was first admitted to the hospital on March 18, 1952, because of abdominal and vaginal pain of 6 months duration. Associated with this was a tumor of the vagina of one year's duration. The vaginal tumor gradually increased in size after onset and at the time of admission had almost completely filled the vagina. Six months prior to admission the patient had been given x-ray therapy at another hospital. Examination on admission revealed a pedunculated papillary tumor with smooth surface, so large that only one finger could be inserted into the vaginal vault. On rectal examination the uterus was thought to be free and of normal size. Biopsies taken from the tumor showed benign squamous papilloma. 100 mgms. of radium was inserted into the vagina and left for 15 hours.

The patient returned 5 months later and was admitted to the hospital. She stated that since her discharge her abdominal and vaginal pains have persisted and occasionally required narcotics for relief.

On rectal examination the tumor was very large and the cervix of the uterus was not definitely felt. Exquisite tenderness on pressure over the vaginal tumor was noted. At operation a portion of the tumor removed was reported as epidermoid carcinoma, Grade II and Grade III. The tumor appeared to invade the entire wall of the vagina with extension to the bladder and rectum, and involved the labia majora on both sides extending through the vaginal vault and involving the cervix and under surface of the bladder. There was no evidence of distant spread. There were no glands along the iliac vessels or aorta nor any nodules felt in the general peritoneal cavity. A bilateral inguinal gland dissection, abdominal and perineal resection of the uterus,

vagina, bilateral salpingo-oophorectomy, partial cystectomy, and partial excision of the rectum and appendectomy. This operation was performed by two teams working simultaneously, two surgeons above and two below.

Post-operatively the patient developed atelectasis and also developed a urethral and vesical fistula. She was discharged in a somewhat improved condition but was to return in two months for repair of the fistula.

She returned on 12-8-52 and underwent an attempt of closure of the vesical fistula. She was discharged and again requested to return for another re-check.

She was readmitted in March, 1953, for re-check and at this time she was found to have lost her urethral sphincter, which was causing her incontinence. There was no evidence of residual neoplastic tissue.

At the present time she is free of pain but uncomfortable because of urinary incontinence.

#### SUMMARY

1. A review of recent advances in radical pelvic surgery has been given with types of curative and palliative operations for the treatment of metastatic cancer of the pelvic organs.
2. A report of three cases of radical pelvic surgery at the Jefferson Hospital, in Roanoke, Virginia, has been given with a two and one-half year follow-up on one case and a one year follow-up on the other two cases.

#### BIBLIOGRAPHY

1. Brunschwig, A.: Complete Excision of the Pelvic Viscera for Advanced Carcinoma, *Cancer*, **2**: 1, 177, 1948.
2. Brunschwig, A., and Walsh, T. S.: Resection of the Great Veins of the Lateral Pelvic Wall, *S. G. & O.*, **88**: 498, 1949.
3. Bricker, E. M.: Bladder Substitution After Pelvic Evisceration, *S. Clin. N. Am.*, **30**: 1511, 1950.
4. Brunschwig, A., Jordan, M. J., and Pierce, V. K.: Radical Pan-Hysterectomy Pelvic Lymph Node Dissection, Total Vaginectomy and Total Cystectomy, *Am. J. Obs. & Gyn.*, **59**: 237-245, 1950.
5. Burt, C. A. V.: Separate Carcinoma of Rectum and Prostate With Reactions of Pelvic Viscera and External Genitals, *Surg.*, **27**: 495, 1950.
6. Payne, F. L.: The Role of Radiation and of Surgery in the Management of Uterine Carcinoma, *S. G. & O.*, **94**: 715, 1952.
7. Cromer, J. K., Hertz, R., and Young, J. P.: Observations on the Use of an Artificially Induced Progestational State as a Pre-Operatively Adjunct to

Radical Pelvic Surgery, S. G. & O., **94**: 703, 1952.

8. Pierce, V. K.: Personal Communication, March 23, 1953.

9. Albertson, H. A., and Trout, H. H., Jr.: Administra-

tion of Potassium to Surgical Patients in a 150 Bed Hospital, Va. Med. Mo., **79**: 25-28, 1952.

*Jefferson Hospital.*

### Symptoms Blamed on Food Allergy.

All that itches is not allergy.

Although two or three out of every hundred persons have a serious sensitivity to food, many of the symptoms ascribed to allergy are not due to that at all, according to Dr. Samuel M. Feinberg, Chicago.

"There is a common notion that when any food does not agree with a person he is allergic to it," Dr. Feinberg wrote in the current *Today's Health* magazine, published by the American Medical Association. "This is far from correct. A large number of people have allergy to foods. Estimates of how many vary. Perhaps in two to three per cent of the population food allergy is more or less a major problem."

Many foods can cause irritation of the gastrointestinal tract or abdominal discomfort without being the result of an allergy, Dr. Feinberg pointed out. Allergy to foods will produce such symptoms as hives, eczema, asthma, nasal congestion and headaches.

Almost every food is at least potentially capable of causing allergy, although a relatively small number of foods are responsible in most cases. The more important causative agents are wheat, eggs, fish, nuts, peas, beans, potatoes, onions, garlic and milk. The amount of a food required to produce allergy symptoms varies considerably, he said, adding:

"The degree of sensitivity varies with different people and in the same person at different times. Fatigue, nervousness, tension, unhappiness, indigestion or certain phases of the menstrual cycle may lower the tolerance and make one more susceptible."

Allergenic properties also can vary with the state of the food, according to Dr. Feinberg. Cooking and

canning tend to destroy some of this activity. Highly refined foods and those with little protein content are least likely to produce allergy symptoms.

"Since foods not only come in contact with the tissues of the digestive tract, but small portions of their allergenically active proteins are absorbed and finally circulate to every portion of the body, virtually no organ is exempt from possible reaction," Dr. Feinberg stated.

"But there is great danger in assuming that any ailment which cannot be explained otherwise is due to food allergy. The allergic person is as subject to other ills as the nonallergic person. Because a person happens to be allergic, it must not be taken for granted that his every ailment can be explained by the allergy."

If a patient's symptoms are caused by food allergy, the final goal is to determine the cause of the allergy, Dr. Feinberg said. Often the food can be identified by the patient, but in many instances careful inquiry by the physician may be necessary.

After the offending food has been determined, it should be eliminated as much as possible from the diet, or the intake reduced to quantities which may be tolerated without reaction.

Dr. Feinberg warned against "food fads" and "health crackpots" who claim elimination of certain foods from the diet will rid one of all types of food allergies. Such diets "frequently result in serious undernutrition and dietary deficiencies," he said, and may cause "underweight, weakness, fatigue, inability to concentrate, nervousness, irritability and growth disturbances."

Dr. Feinberg is chief of the allergy clinic and director of the allergy research laboratory at Northwestern University Medical School.



## MASSIVE HEMORRHAGE IN PEPTIC ULCER\*

M. K. KING, M.D.,  
Norfolk, Virginia

Massive hemorrhage from peptic ulcer is a problem which occurs frequently in hospital practice, and which always represents a serious threat to life. The management of such patients is still somewhat of a controversial matter. I propose to show that the mortality can be reduced in these patients if from the beginning they are regarded as surgical emergencies and handled accordingly. In this discussion, I would like to differentiate clearly between massive and moderate hemorrhage. In mild to moderate hemorrhage, there is ample time to carry out a planned program of preparation for surgery; or in some cases, especially with the first hemorrhage, surgery may be deferred in favor of a program of medical care and observation. In massive hemorrhage, conservatism, procrastination and a "let's wait and see" program often leads to a fatal outcome.

One of our difficult problems in bleeding patients is to determine in the early stages the extent of the hemorrhage and whether or not it has ceased. Hemoglobin and red blood cell studies are of little value at first, because the blood volume diminishes in proportion to the blood loss. The blood volume is restored by plasma from the tissues, and twenty-four to forty-eight hours may pass before this restoration is completed; so the initial blood studies, including the hematocrit, may be normal even though the patient is in deep shock from hemorrhage. Blood volume studies have been of little value in our experience. Laboratory studies are of increasing value as the case progresses, but in the initial stages we must depend largely on clinical evaluation as to the degree and progress of the hemorrhage. A definite decision can usually be reached within twenty-four hours as to whether the hemorrhage is massive and continued, and whether the patient's life will be jeopardized by continued conservative treatment.

In the published reports on bleeding ulcer the mortality rates are sometimes misleading unless they are carefully analyzed. In Holman's<sup>1</sup> series of 161 conservatively treated patients, the mortality rate was 13 per cent, and this is about a fair average for reports from other writers. Holman's study was based on straight hospital admissions for bleeding

ulcer, and represented all degrees of hemorrhage. In a later study, Holman stated that under conservative treatment, the mortality was 50 per cent in these two types of patients: "Namely (1) those who continued to bleed for twenty-four to forty-eight hours after they had been placed on a strict medical regimen, and (2) those who started to bleed in the hospital while under strict medical treatment for a heretofore uncomplicated ulcer."

Meulengracht's<sup>3</sup> report of 1 per cent mortality in 273 conservatively treated patients is frequently quoted, but his findings are at wide variance to other authorities such as Chiesman,<sup>4</sup> whose mortality rate was 25 per cent in 191 patients.

In this discussion, massive hemorrhage may be defined as hemorrhage sufficient to produce shock, and which continues twenty-four to forty-eight hours in spite of all treatment. If this type of hemorrhage is separated from the milder forms, the mortality rate will average 50 percent or above on conservative treatment. We have it within our power to reduce this mortality to a very low figure. We know that the hemorrhage can be stopped surgically, and we know that with few exceptions, the surgery can be done safely. Adequate blood replacement is the key which makes this possible.

Blood replacement should be in proportion to blood loss and should be rapid. 3000 to 7000 cc. of whole blood has been repeatedly given in a twenty-four hour period with no ill effect. It may be necessary to keep several transfusions going at the same time, using large caliber needles, 16-18 gauge, to restore the normal blood level. It is practically impossible for secondary and irreversible shock to develop if this plan is followed.

In the average patient with sudden hemorrhage, the protein, electrolyte and nutritional values are within normal limits prior to the hemorrhage. When the blood loss is rapidly corrected, surgery is tolerated as well as in the patient who has had no bleeding. When surgery is delayed or where blood replacement is too slow, this is not true. The often heard proposition that rapid blood transfusion will increase the bleeding is open to considerable doubt and should be completely disregarded. Holman<sup>2</sup>

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.

states that there is no foundation for this assumption.

In all operations for the control of hemorrhage, it is of the utmost importance to establish the diagnosis, if possible, prior to surgery. Fortunately the diagnosis of ulcer has been established in most cases before the bleeding occurs. In those cases where the diagnosis is in doubt, it is not only permissible but necessary to carry out careful studies to establish the diagnosis. The danger of operating on an undiagnosed case is far greater than that incident to x-ray studies with barium, even when given in the presence of active bleeding. In making such studies an attempt should be made to evacuate clots from the stomach by Wangenstein suction, and all manipulations should be extremely gentle. If no ulcer is demonstrated, or if the cause of the bleeding can not be established, any surgery should be approached with caution. Exploration for undiagnosed upper gastrointestinal bleeding may result in completely negative findings, as more than one surgeon has found to his embarrassment.

The discussion of gastro-intestinal hemorrhage from causes other than peptic ulcer will not be taken up here.

In considering the surgical approach to bleeding ulcer, we hope to achieve three things: (1) Immediate control of bleeding; (2) Prevention of future attacks of bleeding; (3) Permanent relief from ulcer symptoms. These results can best be achieved by a deliberate and carefully done subtotal gastric resection. This procedure controls the hemorrhage and offers a high expectancy of permanent relief.

Such operations as purse-stringing the ulcer bed, cauterizing the ulcer, ligating all adjacent vessels, gastro-enterostomy and vagotomy are dangerous makeshifts which frequently do not control the bleeding even temporarily, and offer no protection against future attacks. I have had the experience of watching an actively pumping arteriosclerotic vessel in the bed of an ulcer continue to bleed after all vessels in the area had been ligated, including the gastroduodenal. The bleeding did not stop until the duodenum was dissected away and mattress sutures had been placed in the ulcer bed.

Abstracts from three recent cases of massive hemorrhage are presented to illustrate some of the points which I have outlined above.

*Case 1.* V. T., an obese white woman of 53 years, was admitted to the hospital on October 23, 1952, in mild shock. She gave a history of duodenal ulcer

for eight years or more, with recurrent episodes of pain and bleeding. The diagnosis of ulcer had been confirmed on x-ray examinations. On the day of admission, she had had a fairly massive hemorrhage, with hematemesis and melena. The initial blood studies showed a red blood cell count of 1.8 million, hemoglobin 4.5 gms. (29%). Since active bleeding had apparently ceased, she was placed on a moderately rapid blood replacement program of 500 cc. twice daily. Several moderate hemorrhages occurred thereafter, and on October 30, another massive hemorrhage developed. Preparations were started for rapid blood replacement and surgery. Her hemoglobin was now only 8 gms. (51%), although she had received 6,500 cc. of blood.

During the next twenty-four hours she received 4,000 cc. of blood, including 1,500 cc. in the operating room. At operation, a large posterior duodenal ulcer was found still actively bleeding. A high subtotal gastric resection was done, which she stood well. Her recovery was delayed by broncho-pneumonia which cleared up under antibiotics. She left the hospital on November 19, 1952, apparently recovered. The hemoglobin at the time of discharge was 12.5 gms. (80%); the red blood cell count was 4.97 million. While in the hospital, she received a total of 13,500 cc. of whole blood (twenty-seven transfusions of 500 cc. each).

*Case 2.* J. S., a white male of 29 years, was admitted to the hospital on April 25, 1953, after a moderate upper gastro-intestinal hemorrhage. He gave a history of having had a gastric resection for duodenal ulcer over two years previously and the present bleeding was presumed to be from a marginal ulcer. The blood pressure on admission was 110/60, pulse 88; hemoglobin 13.2 gms. (88%). Transfusion was withheld pending observation. On the following day, another hemorrhage occurred and transfusions were started. On the third day, a massive hemorrhage occurred. The blood pressure dropped to 70/50 and the hemoglobin 8.4 gms. (56%). He was started on a rapid blood replacement program and prepared for surgery. 7,000 cc. of blood were given prior to and during his operation on April 28, 1953.

The bleeding was found to be coming from both marginal ulceration and hemorrhagic erosions in the gastric mucosa. A very high gastric resection was done. He stood the operation well and recovery was uneventful. He was discharged from the hospital

on May 8, 1953, ten days later, in good condition.

*Case 3.* J. W., a white female of 38 years, was admitted to the hospital on September 17, 1953, complaining of severe upper abdominal pain. She gave a history of duodenal ulcer for thirteen years, which had recently become intractable to medical treatment. She was admitted for probable surgery, but there had been no history of bleeding prior to admission. On the day following admission, she had a massive hemorrhage and her hemoglobin dropped from 13.6 gms. to 8.4 gms. (55%), with a red blood count of 2.75 million. Rapid blood replacement with 4,500 cc. of blood were given up to and during the time of operation on September 20, 1953. At operation, a large actively bleeding posterior duodenal ulcer was found with the base of the ulcer formed by the pancreas. A high subtotal gastric resection was done. She stood the operation well and recovery was uneventful. She was discharged from the hospital ten days later in good condition.

#### SUMMARY

An attempt has been made to show that massive hemorrhage from peptic ulcer is a surgical emergency rather than a medical problem. The high mortality of 50 per cent or more which occurs on conservative therapy can be reduced to a very low figure if a program of rapid blood replacement and early surgery is carried out. These remarks are not intended to apply in mild to moderate hemorrhage.

Abstracts from three illustrative cases are presented.

#### REFERENCES

1. Holman, C. W.: *Internat. Clin.*, **3**: 164, 1940.
2. Holman, C. W.: *S. Clin. N. America*, **30**: 421-427.
3. Meulengracht, E.: *Wien. Klin. Wchnschr.*, **49**: 1481, 1936.
4. Chiesman, W. E.: *Lancet*, **2**: 722, 1932.

*500 Wainwright Building.*

---

#### Addition of Nutrients to Food.

In addition of specific nutrients to certain staple foods has been beneficial to the nation's health and has encouraged sound nutritional practices, the American Medical Association's Council on Foods and Nutrition has reported.

However, it stressed the desirability of the individual meeting his nutritional needs by the use of natural foods as far as practicable. People should learn, it was added, the proper choice and preparation of foods, and better ways to produce, process, store and distribute foods.

The council endorsed the enrichment of flour, bread, degerminated corn meal and corn grits; the nutritive improvement of whole grain corn meal and of white rice; the retention or restoration of thiamine,

niacin and iron in processed food cereals, and the addition of vitamin D to milk, of vitamin A to table fats and of iodine to table salt.

"The principle of the addition of specific nutrients to certain staple foods is endorsed for the purpose of maintaining good nutrition as well as for correcting deficiencies in the diets of the general population or of significant segments of the population," it was stated by Dr. James R. Wilson, Chicago, secretary of the council.

"In order to avoid undue artificiality of food supply, foods chosen as vehicles for the distribution of additional nutrients should be, whenever practicable, those foods which have suffered loss in refining or other processing, and the nutrients added to such foods should preferably be the kinds and quantities native to the class of foods involved."



NOTES  
ON  
PULMONARY TUBERCULOSIS\*

Standard Diagnostic  
Study (I)  
Sputum Examination and X-Ray

Application of Standard Diagnostic Study methods by General Practitioners to confirm or exclude the presence of pulmonary tuberculosis is not too difficult when a few basic considerations are borne in mind:

*Sputum examination* is an obvious *first* thing to be done when satisfactory specimens are obtainable. Samples should be tested as soon as possible since recovery of Tubercle Bacilli from sputum (or gastric washings) provides the simplest and most conclusive proof of the presence of active tuberculosis in any person otherwise legitimately suspect. When negative, tests should be repeated time and again, at frequent intervals; cultures should be requested on each specimen whenever possible. The Virginia State Health Department regularly cultures, as well as examines directly, by "concentration" method, all such material submitted to its laboratory in Richmond. (By "concentration method" is meant microscopic examination of specially treated centrifuged sputum sediment).

Where resort must be had to culture, advantage should be taken of the intervening six to eight weeks usually required for a report, to perform the one or more *tuberculin tests* routinely indicated as a part of standard diagnostic study. When sputum is found laden with Tubercle Bacilli (acid fast bacilli), *early*, in the study, in a patient whose clinical condition is thoroughly compatible, tuberculin testing is optional and probably superfluous.

Although technique of gastric lavage is quite similar to and no more complicated than for ordinary gastric analysis there should be but few occasions where a patient need be subjected even to this relatively slight inconvenience, until his tuberculin status has been established. Rare indeed would be the indication for a gastric lavage in a person whose tuberculin tests had been negative through the higher concentrations. The latter, when negative, in and of themselves, for all practical purposes, rule out clinical tuberculosis, and other diagnostic possibilities should be further explored.

In actual practice a single report direct from a certified laboratory of a sputum positive for acid fast bacilli (even by direct examination or by "concentrate") is generally accepted as sufficient evidence to justify formal recording of the case by the Health Department, as "Pulmonary Tuberculosis, Active"; few such diagnoses must later be changed.

The attending physician, however, understandably may wish to await confirmation by one or two additional examinations in the laboratory before officially reporting a case to the Health Department, or notifying the patient, even where the latter is clearly a suspect in other ways.

There will be infrequent occasions when the attending physician feels two or more positive reports of acid fast bacilli, observed by direct examination or concentrate, to be difficult to reconcile with the total clinical picture. He will then arrange to have the acid fast organisms adjudicated in terms of pathogenicity. They are bacteriologists who insist they can identify virulent Tubercle Bacilli by culture growth characteristics alone; however, Guinea-Pig inoculation is almost universally preferred to establish this crucial point with the finality it deserves.

When satisfactory specimens are not or cannot be submitted, or when no sputum is produced, culture of gastric washings is always indicated, and should be done without delay, especially in the suspect who has a positive tuberculin test. To expedite matters gastric lavage cultures can be repeated without necessarily waiting for a report upon the first or preceding one.

While it is true that some tuberculous patients, until diagnosed and instructed, have been known to deny the production of sputum, which later with practice and training could be obtained and examined, it is not good practice to take for granted that *every* suspect, particularly among the otherwise asymptomatic clientele derived from survey, can produce sputum at will or upon request.

Accordingly, when an apparently healthy person—

\*Prepared by the Virginia State Health Department.

referred for diagnostic study by virtue of x-ray findings, stoutly avers that he does not produce sputum, it would perhaps seem not unreasonable to suppose that he either is unaware of its existence, wishes to conceal its presence, *or just doesn't have any*; whichever is true, gastric lavage is indicated *at once*, as a matter of routine, in the suspect whose tuberculin test is positive.

Instances have been noted where a physician, in commendable eagerness to complete an examination form, *insisted* upon being provided with a sputum specimen, over the vigorous protests of his patient. Needless to say, failure to find Tubercle Bacilli in the saliva finally submitted by the hard-pressed suspect can be misleading to the physician, and the whole experience relating to its enforced collection, fraught with confusion, if not downright exasperation, for the victim.

Like any other symptom of tuberculosis, sputum may or *may not* be present in any given patient (let alone, suspect). Normal healthy people *do not expectorate*, in the commonly accepted sense this term is used in medical parlance; otherwise it would be impossible to distinguish between people who produce sputum and those who do not (a line has to be drawn *somewhere*).

One frequently finds recorded on sanatorium charts (and in the literature) statements to the effect that "the patient has no symptoms, and his sputum is negative."—an obvious contradiction of terms we could do without! The statement would be much more realistic, were it to read "the patient has no symptoms except sputum, which is negative!" (*provided*, of course, he *still has bona fide sputum!*)

*X-ray examination*—provides the best method for detecting the *possible* presence of pulmonary tuberculosis prior to onset of symptoms; after symptoms supervene x-ray is one of the most useful of diagnostic aids. There are limitations to its effectiveness, however; for example, it has long been agreed by roentgenologists that tuberculosis cannot be diagnosed from *one x-ray alone*. The *most* that can be said of any *single x-ray examination* is that it is "characteristic" of the disease. On the other hand, a second basic fact relative to tuberculosis and x-ray, deserving of equal emphasis, is that "*No one can truthfully assure a patient he does not have tuberculosis without at least one examination by x-ray.*" Physical examination is notoriously inadequate for this purpose, nor can fluoroscopic screening, even in

the hands of experts, be depended upon for the detection of minimal lesions.

X-ray shadows *typical* of pulmonary tuberculosis, with or without cavity, may be caused by carcinoma, coccidioido-mycosis, histoplasmosis, non-tuberculous abscess, to mention but a few; even virus infection, though rarely responsible for cavitation, can simulate tuberculosis in other ways. Since these and other conditions *all too frequently* produce x-ray shadows indistinguishable from tuberculosis, corroborative evidence should be sought *in every instance* before *any* condition, revealed for the first time, and up to that point, *only*, by x-ray, is diagnosed as tuberculosis.

Where shadows suggest an advanced tuberculous lesion, including cavitation, expectoration is a commonly associated symptom; an almost casual inspection of but a single specimen by direct examination at times will suffice to clinch the diagnosis. "On-the-spot" confirmation in office or clinic need not, therefore, delay diagnosis of the more dangerously communicable case for longer than minutes or hours. However, failure to find Tubercle Bacilli at all, under circumstances where they should be plentiful (were the lesions tuberculous) should immediately alert one to the *possibility* of malignancy or of some other non-tuberculous condition being responsible.

Upon occasion, in the past, there have been placed upon waiting lists of Tuberculosis Sanatoria, patients with x-ray evidence so clearly indicative of tuberculosis that sputum examination was considered unnecessary. Later, upon admission, in some of these patients, routine or special sputum examinations failed repeatedly to reveal Tubercle Bacilli; the patients belatedly (relative to *first x-ray*) were directed to a general hospital; carcinoma, when found, had sometimes become inoperable.

True, carcinoma of the lung formerly was not too frequently reported and little more than supportive treatment could be offered. But today this disease entity, particularly the bronchogenic type, allegedly is many *many* times more prevalent than it was a generation ago. Moreover, modern surgery (with appropriate adjuvants) provides an almost literal "sure-cure" when diagnosed early. Indeed, malignancies can be removed successfully (without recurrence) even when the original x-ray picture suggests extensive involvement (in *most* of the *latter* instances, however, foreboding radio-opacities are found at operation to be produced, in large part, by

atelectasis, inflammatory, and other relatively innocuous tissue reactions, not infrequently observed as secondary accompaniments).

Special position films, and *much* more important, *serial x-rays*, taken over periods of weeks or months, sometimes provide a very useful method for establishing a diagnosis where the findings can be integrated with the results of other studies, *even in the absence of laboratory confirmation*. Essentially this is a process of elimination in which "time-element" plays an important part.

There remains one type of lesion which can defy interpretation even upon serial and/or special position x-ray or indeed by any other diagnostic procedure short of surgical exploration. Reference is made to the "solitary nodule," where even the presence or absence of partial calcification does not provide a dependable clue to character or age of the underlying pathology. Upon excision these identical appearing radio-densities prove to be tuberculoma,

carcinoma, or benign tumor, generally in about equal numbers, although there naturally is a substantial variation depending upon the age group reviewed. Due to their inherent malignancy potential these nodules, and for that matter, all other suspicious lesions where carcinoma is regarded to be a serious or primary contender for diagnosis *from the very beginning* (on the basis of x-ray evidence or otherwise) should be given the benefit of *very early surgical consultation* (without waiting for *report* of routine culture on sputum or gastric washings).

\* \* \* \* \*

In most instances it should be possible to confirm or exclude pulmonary tuberculosis in a suspect within a matter of months (often sooner) provided appropriate standard diagnostic studies are carried out according to protocol. When these procedures prove inconclusive, the patient commonly will be referred for special examinations, such as bronchoscopy, bronchography, exploratory surgical operations, etc.

---

There seems to be little doubt that physical and intellectual fatigue, as well as painful emotions, decrease resistance of the body to infection; but the physiologic mechanisms which determine these important relationships are totally unknown. Despite all this ignorance, however, a belief shines as a beacon to guide our efforts. It is that the defense mechanisms of the body which promote resistance to infection appear to be closely related to the physiologic processes which make for good health—good health being here measured in the terms broadly referred to as well-being by the layman. The inner logic of the program of antituberculosis associations should lead them to become truly health associations. For it can hardly be doubted that, in final analysis, health is a positive attribute rather than merely the absence of disease. Rene J. Dubos, Ph. D., *Am. Rev. Tuberc.*, July, 1953.

---

The contrast in tuberculosis mortality rates of the Japanese in Hawaii as compared with the rates in Japan is of interest. In Hawaii, the rate for the five-year period, 1918 through 1922, was 132 per 100,000 as compared with 12 in 1952. In Japan, on the contrary, the rate for 1918 through 1922 was 233 and, in 1951, the last available figure was 111. Similar differences exist in other races such as the Filipinos, Chinese, and Koreans, all having lower rates in Hawaii than those reported in their respective countries of origin. In all probability, higher living standards and better nutrition are the most important factors to account for these differences. Hastings H. Walker, M.D., *Am. Rev. Tuberc.*, December, 1953.



## CORRESPONDENCE

**Re: Conference on Problems of Medically Indigent.**

Dr. Vincent W. Archer  
University Hospital  
Charlottesville, Virginia

I want to take this opportunity to tell you how much we appreciate your interest in the problem of indigent hospitalization as President of The Medical Society of Virginia. The recent institute that the medical society has sponsored was not only a great success, but has created much favorable comment.

All of us are deeply concerned with this problem, and the medical profession can make a great contribution with their thinking and cooperation. They have a professional and practical understanding of the problem. If we are to prevent socialized medicine, we must deal with this problem in an intelligent manner.

With kindest regards, I am

Sincerely yours,  
Charles R. Fenwick

**American Medical Education Foundation.**

Dr. Vincent Archer, President  
The Medical Society of Virginia  
Charlottesville, Virginia

The A.M.E.F. meeting in Chicago on January 24 was most inspiring. Nearly every state was represented. I want to thank you for appointing me to represent the State of Virginia. Here is a condensed report of this meeting.

Dr. Louis Bauer, President of the A.M.E.F., talked to us first. He stated that over a million dollars was raised last year, and it would have been nearly two million if all the doctors' contributions had gone through the A.M.E.F. for creditation. Some states have a good record, but some states are still asleep and have a poor record because they have been slow in picking up their responsibilities. Every doctor owes something to this Foundation, for his tuition paid only one-third of this college expenses. The doctors must assume their responsibilities for endowments are not increasing. One of two things must happen. There must be more money, or the type of education must be cut down. High standards are going to be lowered if there is not adequate financial support.

Another factor not generally remembered is that some money is coming from the Federal Government

now, although this is not enough to be significant. If the Federal Government takes over, private contributions will cease. But Dr. Bauer adds that in his opinion, concerted effort will make a success.

Dr. Edward L. Turner, Secretary of the Council on Medical Education and Hospitals, and Secretary of the A.M.E.F., laid stress on the fact that faculty, facility and equipment costs of medical schools are increasing. The cost now is fantastic; as compared to 1920 it has trebled. There must be a way for deserving young men to get loans and scholarships for medicine. The tuition paid covers less and less of the cost.

Mr. E. J. Ade, Director of Fund-Raising for the National Fund for Medical Education, said in part that big business is interested in medicine more and more, especially industrial and occupational medicine. There are two sides to this team now—the doctors and big business. So far the doctors are ahead, which is as it should be, and it helps because business wants to know—What are the doctors doing? American business is now the only source that can give big. The strongest bulwark that business has for free enterprise is supporting medicine. In 1951 the medical profession gave over \$600,000; in 1952, over \$700,000, and in 1953, \$1,367,000. So the A.M.E.F. is growing. There are now over 50 national industry committees at work to promulgate the fund. It is a national problem. Industry increased its gifts by 74% in 1953. If people do not listen to their request for funds, then federal action must come.

It was again brought out that the A.M.A. pays all costs of the A.M.E.F. in addition to giving \$500,000 each year. The cost in 1953, paid by the A.M.A., was over \$50,000. So doctors do not give to educators 80 cents on the dollar, but their dollar goes 100 per cent towards advancing medicine.

It was brought out in Chicago that the National Fund for Medical Education distributed to medical schools from January 1, 1953, to July 1, 1953, \$1,944,151. It was brought out that the A.M.E.F. raised from January 1 to December 31, 1953, \$1,089,962.93. The National Fund makes a 10% deduction of money raised by the Fund to cover overhead; but, to reiterate, the A.M.E.F. makes no deductions. The number of physicians who contributed in 1953 was 17,564. Virginia had 186 contributors who gave, according to the record in Chicago, \$4,854.75. The highest contributed by any

state was by Illinois, who contributed \$190,461.99. It is interesting to note that the Women's Auxiliaries contributed from January 1 to June 31, 1953, \$26,-864.45.

The House of Delegates to the Illinois State Medical Society voted last year a blanket increase of \$20 per member in the state dues, which money was turned over to the Foundation. Utah has recently followed the example set by Illinois. It is believed by some that this will solve the problem of organizing and maintaining active committees for the purpose of annual solicitation of the Society's membership.

I recommend wholeheartedly, from the several years' experience that I have had on this committee, that our Council seriously consider increasing our dues by \$20 a year per member and that this amount be given to the A.M.E.F.

There are several reasons why I think that it is wise to add this to the State dues. One is that it is becoming embarrassing for the same members of the committee to approach the same doctors annually to get their contribution. Another reason is that

there are doctors who have turned members of the committee down flatly and refused to contribute a penny, while there are other doctors making less money who contribute from \$25 to \$50. This is very unjust. I know of no way for the money to be raised from the doctors of the State in a fair and equitable way except by increasing the dues.

I would like to close my report by quoting from Dr. L. T. Coggeshall, Professor of Medicine, University of Chicago: "I would like to conclude this very interesting and informative discussion by saying that the proper education of doctors in this country is the core of the nation's health problem and that it is of vital concern to the American public. Medical schools are doing their utmost to maintain or actually improve the caliber of the nation's physician, but unless they have more adequate financial support there is a real danger that the ultimate result will be a dilution of the quality of medical care."

MARCELLUS A. JOHNSON, JR., M.D.

*Chairman, Va. Committee for the  
A.M.E.F.*

January 25, 1954

---

## BOOK ANNOUNCEMENTS

**Children of Divorce.** By J. LOUISE DESPERT, M.D.  
Doubleday & Company, Inc., Garden City, N. Y.  
1953. 282 pages. Cloth. Price \$3.50

With 350,000 marriages in the U.S. ending in divorce each year, Dr. Despert's understanding and expert book should prove a help to many people: to those who are actually undergoing the experience of separating as well as those who are counseling with them. The material for the book has been chiefly gathered by Dr. Despert in many years of experience with the Payne Whitney Nursery School in New York.

The guiding theme of the book is well expressed by the author in the foreword: "Thus out of the actual experience of unhappy children and their parents came both the reassurance and the warning which underlie this book. The reassurance, to parents faced with divorce or already on the far side of it, is that divorce is not automatically destructive to children; the marriage which divorce brings to an end may have been more so.

"And the warning is that parents should look to their children not the day after the decree is granted, nor even the day before, but at the moment when they begin to be aware of trouble between themselves."

The author emphasizes that it is not so much the actual, but the "emotional" divorce of the parents that creates hurt and conflict in the children. Through impressive simple case histories, one comes to understand in concrete terms what kind of feelings and problems are upsetting these children. Equally concrete and sound is the advice given to parents how to help children with their conflicts, how to keep the lines of communication open between themselves and the child. Dr. Despert in this connection shows equal consideration and understanding for the troubled feelings of the parents as well as of the children.

A useful chapter is added suggesting where and to whom to turn for help if parents want counseling service for their difficulties.

A.R.F.

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### The Development of Mental Health Services in Rural Areas\*

The comparatively rapid growth of mental hygiene clinics in the United States has provided psychiatric facilities for many individuals who previously could not obtain such help in meeting the conflicts arising from everyday living.

In the 1952 Directory of Psychiatric Clinics published by the National Association for Mental Health there are over one thousand mental hygiene clinics listed. Most of the clinics, however, have been established in cities of 100,000 population or over. Another large group of clinics is in cities between 10,000 and 100,000 population, which serve not only the city in which they are located, but also surrounding county areas or the combined population of two or more cities.

Although the average population per square mile in the United States, a nation of about three million square miles and one hundred sixty million people, is approximately fifty people, the present clinical facilities for those people who live in areas of less than fifty people per square mile is still very limited.

The problem of extending mental health services has been dealt with in four main ways:

First: *The part time clinic or the traveling clinic.* This type of clinic has been used with varying degrees of success. A smaller community which has no mental hygiene clinic might have one day or more per week in which clinic personnel, including a psychiatrist, psychologist and psychiatric social worker will extend service to that community.

Second: *The state-wide clinic located in either the capital or a central city.* In this type the professional services are centralized, and many times people must travel extreme distances for services.

Third: *The out-patient clinic* where the psychiatric facilities are located in or subsidiary to the mental hospitals.

Fourth: *The rural clinic*, which functions much the same as a large city clinic. The main difference is that nearly all the people come from farms or communities of under 5,000 population.

The rural clinic as described in the foregoing paragraph is still quite rare, yet has many advantages

which the other three methods of extending clinic services to rural communities do not have.

In the Commonwealth of Virginia there are fourteen mental hygiene clinics. Five of them are from cities in which the area served has a population of over 5,000 people per square mile. Two of the clinics are located in fairly large cities which have an average population of between 100 and 5,000 people per square mile. Three more clinics serve areas in which the average population is from 50 to 100 people per square mile. Two clinics are state-wide. One clinic, the Tidewater Guidance Clinic in Williamsburg, serves an area of about 2,500 square miles with less than 100,000 population. This makes the average population less than forty persons per square mile.

The experiences in the development and growth of the Tidewater Guidance Clinic present certain light on the problems in establishing rural mental health clinics.

The need for rural mental health services exists, but perhaps the main difficulties in establishing a rural clinic should be considered.

1. *Problem of Community Interest:* In nearly every community there are citizens who see the value of having a "psychiatric first-aid station". They are able to stimulate interest in other citizens, but find it practically impossible to establish a full time clinic in their community. They may be fortunate in having available a part time clinic, a traveling clinic, or out-patient services in a mental hospital, or they may need to resort to state-wide services. If they tried to establish a full time clinic, hire a psychiatrist, psychologist and psychiatric social worker, the expense in salaries involved would be so discouraging that having a clinic would seem impossible. The only practical answer to this dilemma is to combine the interests in the whole geographic area.

2. *Development of Community Cooperation:* Establishing a common purpose for a number of communities might involve a survey of needs in the area and the proposing of a psychiatric clinic which will meet the common needs.

Professional cooperation of physicians, judges, school superintendents, county officials, and other in-

\*Article prepared by W. R. Reese, Psychologist, Tidewater Guidance Clinic, Williamsburg, Virginia.



fluent citizens must be centralized on the one common objective. This may be somewhat difficult in many rural areas where there are many local governmental units. This difficulty may be overcome by establishing a system where the clinic will be considered a part of the local facilities, even though it may be located in a community which is twenty-five to fifty miles distant from the clinic. If the main source of stimulation is local interest, the obstacles can be overcome.

3. *Problems of Organization:* Since the rural clinic is primarily for the communities which it serves, a fair basis of dividing responsibilities must be made.

In the case of the Tidewater Guidance Clinic at Williamsburg, there are twelve local cooperating units; eleven counties and the City of Williamsburg. Each cooperating unit has a representative, and the twelve representatives make up the Clinic's Advisory Board. The Board members have been concerned with obtaining support from the counties which they represent. Together the Board determines how the financial obligations can be met in a fair way to all local communities.

When the clinic was first established the counties paid proportionate amounts in accordance to the distance from the clinic. Later an analysis of the proportionate use of the clinic and the possible future potentialities of use were used in making requests for local funds.

The local government is probably one of the best sources of local funds, since the service is available to all of the people in the community. However, there are methods of getting local funds by fund raising drives of local clubs in the county concerned.

In the Tidewater Guidance Clinic the main source of local funds is voted on by the local County Boards of Supervisors. Fees may be another source of funds; however, the experience of the Tidewater Guidance Clinic has pointed out that the continuance of local community cooperation perhaps can be obtained better by making fees only supplemental and keeping the maintenance of the clinic dependent upon the local communities' cooperation. Many citizens have felt the responsibility for keeping up the clinic in much the same manner as the responsibility for keeping up their public schools.

Of course, a rural mental hygiene clinic has many of the common problems that exist in all mental hygiene clinics. In an area where there is no great concentration of population some of these problems are:

1. The distance involved in keeping appointments is not too great if there are automobiles or public transportation available, since very few communities are located more than fifty miles away. However, in some cases no public or private transportation is available for people who wish to seek help. In some cases the Department of Public Welfare representatives have found ways to furnish transportation, but there are still a great number of people for whom transportation is not available.

2. Personnel who are hired on a rural clinic staff should be aware not only of behavior of individuals, but also of the understanding of rural community living. In many cases they are needed to circulate in local community meetings, such as P.T.A. meetings or meetings of local clubs.

3. In most rural communities there do not exist such facilities as family service organizations, vocational counseling services, alcoholics anonymous, or special schools which might be found in larger communities. Therefore, in giving "psychiatric first-aid" the clinic has to consider how extensive services will be. In rural clinics the services should probably be more extensive than usual.

4. The psychiatric social worker in a rural clinic, in order cooperatively to work with physicians, schools, courts, and other agencies, has to spend more time in travel than usually expected.

5. The educational problem of interpreting services is extended because of distances involved. In some cases this may be dealt with by lectures to the various community groups, while in other cases it is extremely beneficial to have local county groups meet in the clinic's offices in order to get a better understanding of one of their local facilities.

Although there exist a number of problems in the establishment of a rural mental hygiene clinic, it perhaps has advantages over other types of rural mental health services. It is more a part of the community than a part time clinic, traveling clinic, or a state-wide clinic. It dissociates the mental hospital stigma that may be attached to a mental hospital out-patient clinic, and puts the emphasis on a preventative program.

There exist needs for more rural mental health services throughout Virginia as well as the nation. As communities develop interests which can be used to cooperate in establishing rural clinics, and as more professional staff members become available, a great stride in attacking our number one health problem will be made.

# Medical Society of Virginia Cancer Committee

*Chairman, George Cooper, Jr., M. D.*

Medical School Building, University, Va.

Reprints of this and preceding Bulletins may be obtained from this office

March 1, 1954

## Cancer of the Vulva

Though cancer of the vulva comprises only about 4% of all female genital cancers and is rare in women under 60, its importance as compared with other surface cancers is out of proportion to its frequency.

The lymphatic supply of the vulva is bounteous and cross anastomosis plentiful. Drainage is to the inguinal and femoral nodes. Bilateral lymphatic metastasis occurs early. Compared to corresponding stages in the local development of cancer of the cervix, metastases to lymph nodes occur twice as frequently in cancer of the vulva. Fortunately, spread beyond the inguinal and femoral nodes takes place slowly. Until femoral nodes have become adherent, inguinal nodes broken down, or until the tumor has extended into the vagina, urethra, or sub-pubic space, radical surgery is therefore feasible. Radiation has little to offer because these cancers are uniformly resistant and because the region tolerates radiation poorly.

### *Prevention Measures*

1. Cleanliness and careful attention to chronic infection, discharge, and dermatitis.

2. By far the most common type of cancer of the vulva is that which originates from the epidermis of the labium minus and the prepuce of the clitoris. In the large majority of these patients, there is a pre-existing leukoplakic vulvitis with or without kraurosis. All leukoplakic vulvar epidermis should be widely excised.

3. Senile warts and Bartholin's gland cysts should be excised. Both are precancerous lesions and Bartholin's gland tumors are more malignant than the epidermoid type.

4. Nevi of the female genitalia should be excised with a wide margin. Nevi in this location are very apt to develop into melanomata, especially during pregnancy.

5. Caruncles should be vigorously treated. Cancer of the urethral meatus occasionally develops in a neglected caruncle.

6. Most cancers of the vulva arising from the vestibular epithelium develop in a pre-existing tertiary syphilitic lesion. Negroes are particularly susceptible to malignant degeneration in this type of focus of chronic irritation.

### *Diagnosis:*

All ulcerations, including those found in syphilitics, all papillary or cauliflower tumors, and subcutaneous nodules (Bartholin's gland and sweat gland cancers usually break through their capsules only after they have metastasized) should be biopsied.

Because of their early lymphatic spread, prompt diagnosis is most necessary.

### *Treatment:*

Bilateral vulvectomy, accompanied or followed by radical dissection of the regional lymphatics, is the treatment of choice. Tausig reports 64% of five year survivals when radical surgery is done, only 16% of five year survivals when operation is limited to vulvectomy and removal of superficial glands.

If the cancer is too far advanced for radical surgery to offer hope of cure, diathermic destruction, partial cautery excision, irradiation, or a combination of these means can do much to eliminate foul tissue and prevent pain. For pain relief only, cordotomy, in selected cases, is ideal.





## MEDICO-LEGAL NOTES

### Adoption Procedure\*

Because of (a) the sterility of one or both marital partners, (b) the presence of undesirable genetic traits in one or both marital partners or (c) other social, economic or medical factors, physicians are frequently called upon to advise patients concerning the advisability of adopting children. This article is presented for the purpose of acquainting the physician with some of the legal problems involved in adoption proceedings and so that the physician may guide his patient to the proper persons or agencies concerned. The physician is not authorized, and should not attempt to act as an intermediary in the adoption process.

Chapter 14, Title 63 of the Code of Virginia outlines the legal procedure involved in the adoption of a child: A petition is filed by any person who is a resident of the state, in a court of record having chancery jurisdiction in a city or county in which the petitioner resides, for permission to adopt a minor child not legally his by birth, and if also desired by the petitioner, to change the name of such child. In case of married persons, the petition is a joint petition of the husband and wife. In the event the child to be adopted is legally the child by birth or adoption of one of the petitioners, then such petitioner unites in the petition only for the purpose of indicating his or her consent thereto.

After filing of the petition, the Commissioner of the court makes, or has made, a thorough investigation, as described below, and reports in writing to the court within sixty days. Investigation is the rule, but may be dispensed with at the court's discretion under a few certain circumstances outlined by the statutes. Such investigation may be made through the Department of Welfare and Institutions, local superintendent of welfare or other welfare agency of a county or city, or through a child placement agency. A child placement agency is defined by the statutes as a person or agency licensed or legally authorized to carry out such work by the State Department of Welfare and Institutions. One such private licensed agency is the Children's Home Society of Virginia, which has offices in several of the principal cities of the state.

\*Contributed by Charles W. Whitmore, M.D., LL.B., University of Virginia Hospital and School of Medicine, Charlottesville, Virginia.

The investigation includes, in addition to any other inquiries which the court may require the Commissioner to make, inquiries as to (1) whether the petitioner is financially able and morally fit to care for and train the child, (2) what the physical and mental condition of the child is, (3) why the parents, if living, desire to be relieved of the responsibility for the custody, care and maintenance of the child, and what their attitude is toward the proposed adoption, (4) whether the parents have abandoned the child or are morally unfit to have custody over him, (5) the circumstance under which the child came to live, and is living, in the home of the petitioner, and (6) whether the child is a suitable child for adoption by the petitioner. The age, culture, education, race, heritage and religion of both the child and the petitioners may be investigated in determining the suitability of the child for adoption by the petitioners.

In addition to the material noted in the preceding paragraph, the report of the Commissioner must also include his recommendation as to action to be taken by the court on the petition. A copy of the report is furnished Counsel of Record for the parties involved, if requested.

Written evidence of consent to the adoption must be filed with the petition to adopt by the following persons: (1) the child to be adopted, if he or she is 14 years of age or older, (2) by both parents, if they are both living or by the living parent if one of the parents is dead, or (3) by the mother in case of a child born out of wedlock, or (4) by one parent, if the other has deserted, neglected or cruelly abused the child or is insane, or if the consent of the other parent, for any reason deemed satisfactory by the court, is not necessary in the circumstances prevailing as disclosed by the evidence, or (5) by a child placing agency in case the parenteral rights of both parents have been terminated by any court of competent jurisdiction or by other legal means, and the child has been lawfully placed under the care and custody of the agency, or (6) by a Commissioner in any condition of fact not provided for.

The court usually provides for a probationary period of one year, during which the child lives in the home of his adopted parents, before the order of adoption is made final.

The adopted child becomes to all intents and purposes the child of the persons adopting him. The child is entitled to all the legal rights and privileges,

and is subject to all the legal obligations of a child of such person or persons born in lawful wedlock. The natural parents of the child are divested of all legal rights and obligations with respect to the child and the child is freed of all legal obligations of obedience and maintenance with respect to them.

Many of the legal actions involving questions concerning an adoption, other than the adoption actions per se, arise over problems of inheritance. For the purpose of inheriting real or personal property, in the absence of a will, a legally adopted child inherits, according to the statutes governing the descent of real property and the distribution of personal property, from and through both the natural parents

and the parents by adoption, any time after the entry of either a temporary (probationary) or final order of adoption by the court. If an adopted child dies without a will, without children surviving him, his property passes, according to the statutes of descent and distribution, to those persons who would have taken had the dead child been the natural child of the adopting parents; however, any property, real or personal, derived by deed, or by gift, or by will, or by inheritance, from the natural parents, or from either of them or their kindred, and capable of identification as such, passes, according to the statutes of descent and distribution, as if he had not been adopted.

## New Books.

Some of the new books received at the Tompkins-McCaw Library of the Medical College of Virginia, Richmond, are listed below. They may be had by our readers under usual library rules.

American Journal of sociology—Aging and retirement. Vol. 59, #4, 1954.  
 Behrens, ed.—Atomic medicine. 2d ed., 1953.  
 Benz—Pediatric nursing. 2d ed., 1953.  
 Berens & Sheppard—Abstracts on military and aviation ophthalmology and visual science. 1953.  
 Bisch—Cure your nerves yourself. 1953.  
 Bowers, ed.—Surgery of trauma. 1953.  
 Breckinridge & Vincent—Child development. 2d ed., 1949.  
 Britannica book of the year. 1952.  
 Camp—Anatomical studies for physicians and surgeons. 1939.  
 Ciba Foundation—Colloquia on endocrinology. Vol. 6, 1953.  
 Dunphy & Botsford—Physical examination of the surgical patient.  
 Elliott—Zoology. 1952.  
 Epstein—An atlas of skull roentgenograms. 1953.  
 Gardiner—The principles of general biology. 1952.  
 Good—Probability and the weighing of evidence. 1950.  
 Harper—Review of physiological chemistry. 4th ed., 1953.  
 Jones, ed.—The life and work of Sigmund Freud. 1856-1900. Vol. 1, 1953.  
 Jones, ed.—Physician's desk reference. 1952.  
 Josiah Macy Jr. Foundation—Connective tissues. 1953.  
 Keynes, ed.—Blood transfusion. 1949.  
 Lillie's development of the chick. 3d ed., 1952.

Luria—General virology. 1953.  
 Main & Richardson—Physiology. 2d ed., 1953.  
 The medical directory. (British). 1953.  
 National Foundation for Infantile Paralysis—Speakers handbook. 1953.  
 Nichtenhauser, et al.—Films in psychiatry, psychology and mental health. 1953.  
 Oliver—Parkinson's disease and its surgical treatment. 1953.  
 Ormsby & Montgomery—Diseases of the skin. 7th ed., 1948.  
 Proceedings of the American academy of forensic sciences. Vol. 2, 1954.  
 The psychiatrist, his training and development. 1952 Conference. 1953.  
 Reid & Hagan—Residential treatment of emotionally disturbed children. 1952.  
 Roberts & Miller—Heat and thermodynamics. 4th ed., 1951.  
 Ross—New hearts—new faces. 1954.  
 Schneck, ed.—Hypnosis in modern medicine. 1953.  
 Singer—Vesalius on the human brain. 1952.  
 Smul—Respiratory diseases in allergy. 1953.  
 Spencer—Wonders of modern medicine. 1953.  
 Stevens, ed.—Administrative medicine. 1953.  
 Transactions of the American Surgical Association. 1954.  
 Transactions of the Association of American physicians. 1953.  
 Transactions of the section on ophthalmology. 1953.  
 Vitamins & hormones. Vol. 11, 1953.  
 Whitby & Britton—Disorders of the blood. 7th ed., 1953.  
 Wilson—School health services. 1953.  
 The world almanac and book of facts. 1954.  
 The year book of drug therapy. 1953-54.

## PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.

*State Health Commissioner of Virginia***Meningococcus Meningitis**

The *Diplococcus intracellularis meningitidis*, known today as *Neisseria meningitidis*, was first cultivated and identified as the causative agent by Weichselbaum in 1887. Further studies through the years have shown that it is not a homogeneous species, but is separable into types that can be identified by specific agglutination reactions. This is important because of the fact that the serum used in treatment must contain the antibodies that are specific for the type of meningococci with which the patient is infected.

Meningococcic meningitis is spread through carriers as well as through persons having clinical or subclinical infections. Carriers may be transient carriers, which is usually true, or they may become chronic carriers. Meningococcic meningitis appears whenever there are concentrations of groups of people as occurred in training camps in both World War I and World War II. It occurs in epidemic waves and between epidemics it continues to develop sporadically. It is a disease found in the more humble walks of life, of crowding, of poverty and of insanitary surroundings. It is world-wide in its distribution and is found more commonly in males than in females. The age of greatest susceptibility is from ten to twenty-five years. Infection is rare after forty-five. It is seasonal in its appearance; in temperate climates the low rate is from June to November and the peak is reached between February and April.

For convenience meningococcic infections may be divided into those cases with and those without meningitis. Clinically, the infection may be divided into three stages. The first is a localized infection of the upper air passages; the second is an invasion of the blood stream producing a septicemia known as meningococcemia, or cerebrospinal fever; and the third is the metastatic stage producing localization, usually in the meninges, not infrequently in the skin, pericardium, joints, eyes, lungs or other regions. The disease may be arrested at any one of these stages or may progress from one stage to the other so rapidly that the stages seem to coexist. Consequently the division is not of great practical value either in the recognition or in the management of the disease. The

most important factor in dealing with the disease is an early diagnosis. When intensive treatment is instituted within forty-eight hours of the onset, the mortality is lowest. When the treatment is delayed beyond the second day there is a rise in mortality with each succeeding day.

In army camps it was found that control of the carrier of meningococci proved effective in reducing the morbidity rate. By giving sulfadiazine to a selected group of soldiers the nasopharynx of the carrier was apparently cleared of meningococci and the development of the disease was negligible.

The treatment of the disease by chemotherapy was found to be extremely valuable. Today it appears that the treatment of meningococcic infections with penicillin is striking. Penicillin is used in combination with sulfadiazine; if the sulfonamide causes toxic effects, penicillin alone should be substituted. Antimeningococcic serum is rarely used. Chloramphenicol, aureomycin and terramycin have also been used successfully in the treatment of patients with meningococcic infections. When a case is diagnosed the contacts should be given sulfadiazine to prevent the development of secondary cases.

If signs and symptoms of adrenal hemorrhage (Waterhouse-Friderichsen syndrome) appear, the prompt administration of cortizone or adrenal cortical extract should be made in addition to the sulfonamide and penicillin therapy. In Virginia during 1953 there were 186 cases of meningococcus meningitis reported and in this group there were 39 deaths, a fatality rate of 20.96. This means that there was slightly more than one death in each five cases. We should lend our efforts to make an early diagnosis and to institute prompt and vigorous treatment, and thereby reduce this fatality rate which is considered high.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE  
DISEASE CONTROL

	January 1954	January 1953
Brucellosis .....	0	6
Diphtheria .....	7	20
Hepatitis .....	541	244
Measles .....	975	279
Meningoccal Infections .....	15	29
Poliomyelitis .....	2	5
Rocky Mountain Spotted Fever .....	0	0
Streptococcal Infections .....	604	954
(Including Scarlet Fever)		
Tularemia .....	11	8
Typhoid Fever .....	2	5
Rabies in Animals .....	30	50



## PUBLIC RELATIONS

American Medical Education Foundation and How It Is  
Helping Your Medical School

THOMAS H. HUNTER, M.D., Dean

The establishment of the American Medical Education Foundation and a brief summary of its objectives were the subject of an article in the News Letter last year. In order to maintain the interest of our alumni in the excellent program of the Foundation, a few of the major advantages of it are re-emphasized below.

The main purpose of the Foundation is to raise funds within the medical profession for the unrestricted use of the nation's medical schools. Donations may be earmarked for a specific school and since all overhead costs are absorbed by the A. M. A., each dollar contributed through the Foundation will find its way to the school designated. In addition, the total of contributions to a specific medical school by alumni and friends is not considered in the allocation of undesignated funds raised by the Foundation and by the National Fund for Medical Education.

The University of Virginia School of Medicine has been benefiting from the program of the Foundation since the latter's establishment in December 1950. During the calendar year 1951, the medical school received a total of \$15,000 in grants from the National Fund for Medical Education, through which the Foundation has arranged to distribute its funds. In 1952, another \$20,140 was received, and it is hoped that the amount of the grants will grow each year as the Foundation becomes more widely known in the profession.

The need for financial assistance remains acute. While the problems of the privately-endowed institution are rather widely recognized, it is most important in our case that the limitations of state support be stressed. First, we are faced with strong new

emotional and political competition for the taxpayer's dollar. More and more state tax monies are going into pensions and benefits for the aged and handicapped, for improving institutional care and mental health programs, to the public schools, highways and hard-pressed cities and counties. Moreover, there are a number of functions and activities conducted by the top-flight medical schools which would not normally come under state support. These include research, special lectures, scholarships, and so on. Burdened as it is with so many institutions of higher learning, the State of Virginia seemingly finds it difficult to raise the scale of faculty salaries. If our medical school is to compete with others for personnel, comparable salaries must be offered. This is now the case, and the loss of key faculty members presents a real problem.

At present a large part of the operating budget of the medical school comes from research grants, many of which are through the Federal Government. The shrinkage of these funds in the near future seems probable under the pressures for government economy, and will intensify our financial problem still further.

These dire needs can be met only with the help of the American Medical Education Foundation and alumni of the medical school, as well as greater support from the State.—*University of Virginia Medical Association News Letter*

Please send your contribution to the American Medical Education Foundation, 535 North Dearborn Street, Chicago or The Medical Society of Virginia, 1105 West Franklin Street, Richmond. Do it today!

---

**WOMAN'S AUXILIARY  
TO  
THE MEDICAL SOCIETY OF VIRGINIA**

---

*President* ..... Mrs. K. W. HOWARD, Portsmouth  
*President-Elect* ..... Mrs. MAYNARD EMLAW, Richmond  
*Recording Secretary* ..... Mrs. LEE S. LIGGAN, Irvington  
*Corresponding Secretary*—  
    Mrs. LEMUEL E. MAYO, Portsmouth  
*Treasurer* ..... Mrs. WILLIAM C. BARR, Richmond  
*Publication Chairman* .. Mrs. WM. S. GRIZZARD, Petersburg

---

### Alexandria.

The regular monthly meeting of the Auxiliary to the Alexandria Medical Society was held on January 26th in Carter Hall of the Alexandria Hospital.

Dr. Alvin C. Wyman, secretary of the Alexandria Medical Society, and liaison officer to the Auxiliary, was guest speaker. He gave a most informative and interesting talk on the activities of the local society.

The reopening of the four year old Shoe Center was announced. This is one of the main projects of our Auxiliary. The various social agencies have been advised that needy children may again be fitted with re-conditioned shoes. This has been delayed due to the necessity of finding a repair service.

Miss Dorothy McMillan, Director of Nurses at the Alexandria Hospital, presented the student nurse who is the recipient of the full scholarship sponsored by this Auxiliary.

SARA W. ENGH

(MRS. A. ANDERSON ENGH)

### Danville-Pittsylvania.

Mrs. M. H. McClintic is chairman of the Ways and Means Committee of this Auxiliary. The chief work of this committee is to raise funds for a Nurse's Scholarship fund to begin April 1954.

Mrs. F. H. McGovern is chairman of the Cancer Control Committee in the special committees of The Medical Society of Virginia Advisory Council.

This Auxiliary has donated \$25.00 to the American Medical Educational Foundation for use in the Virginia medical schools. They have also joined the Virginia Council on Health and Medical Care for the year 1953-1954.

SARAH W. PRITCHETT

(MRS. DRAKE PRITCHETT)

### Richmond.

The annual dinner dance planned by the Auxiliary to the Richmond Academy of Medicine for members of the Academy and their wives was held at the Commonwealth Club on Saturday, February 13th.

Mrs. G. Benjamin Carter was chairman, and she was assisted by Mrs. Richard Baylor, Mrs. Hunter S. Jackson, Mrs. William Barr and Mrs. William Grigg, Jr.

### Northern Neck.

This Auxiliary held a luncheon meeting at Lowery's Grill in Warsaw on January 14th. This was the first mid-winter meeting our Auxiliary has ever held and it was necessary to discuss and dispose of business before the State board meeting in March.

Two new members were introduced—Mrs. Spotswood Stoddard, White Stone, and Mrs. H. H. Westcott, Irvington.

RUTH L. GRAVATT

### Newport News-Warwick.

A luncheon meeting of the Auxiliary to the Newport News-Warwick Medical Society was held on January 27th at the home of Mrs. Thomas N. Hunicutt, Jr., in Huntington Heights. The president, Mrs. Barnes Gillespie, presided.

Mrs. Bernard H. Raymond, Norfolk, chairman of the Nurse Recruitment of the Woman's Auxiliary to The Medical Society of Virginia, was guest speaker. She was introduced by Mrs. Paul Hogg. Mrs. Raymond outlined the progress of the nurse recruitment program of the Norfolk Auxiliary. Three Future Nurses' Clubs have been organized in Norfolk High Schools in the past two years. Great emphasis

is being placed on nurse recruitment by national, state and local auxiliaries.

BESSIE G. AMORY  
(MRS. GUY C. AMORY)

### The Petersburg Auxiliary

To the Fourth District Medical Society had its January meeting in the conference room of the Petersburg Hospital with Mrs. Kirby T. Hart, Jr., vice-president, presiding in the absence of Mrs. Clyde Vick, Jr., president.

Mrs. Garnett Link and Mrs. Francis Payne, Jr., were appointed to be in charge of Doctor's Day. They decided to send each doctor a red carnation for the occasion.

The semi-annual rummage sale is to be held this year, April 22nd and 23rd, with Mrs. E. Palmore Irving in charge.

Contributions were made to the Leigh-Hodge-Wright Memorial Fund and also to the March of Dimes.

Mrs. John E. Hamner gave a report on the nurse recruitment project which is to be discussed more fully at the next meeting.

MRS. JOSEPH P. WHITTLE

### Norfolk.

Mrs. J. R. St. George, president, presided at the January meeting of this Auxiliary, at which time it was voted to be responsible for obtaining 125 pints of blood the first week of March for the Red Cross Blood Center.

Mrs. John Rosenthal, membership chairman, announced the following new members since January 1st: Mrs. Henry Rogers, Mrs. William F. Murphy, Mrs. William C. Andrews, Mrs. Earl Kerpelman, Mrs. Harold Goldman, Mrs. George Rector, and Mrs. Vernon Cofer.

The Health Education committee was in charge of the program. Mrs. James S. Kitterman introduced Mrs. Lucy Mason Holt, vice-president of the Virginia Society for Crippled Children and Adults and president of the local chapter. She discussed the work of the Society and stressed the needs of and the progress made in the local Cerebral Palsy Center.

In observance of Doctors' Day, the Auxiliary entertained the members of the Norfolk County Medical Society with a buffet dinner and dance at the Norfolk Yacht and Country Club on February 10th. At the time, the Auxiliary presented the Society a blackboard to be used in their library. Mrs. C. C. Smith was general chairman, assisted by Mrs. T. Elmore Jones.

HELEN V. KRISCHER  
(MRS. M. I. KRISCHER)

### The American Medical Education Foundation

Was organized in 1949 to help secure private financial support for medical schools. Today, with rising costs of modern training, the schools are in a precarious financial condition.

A physician's tuition pays only twenty-five per cent of the actual cost of his education. The rest of his expense is met by the State, endowment or gifts. These sources are now inadequate to meet present costs. Unless the schools receive some additional funds, they will have to lower their standards or accept federal aid in amounts that might lead to government domination.

Your help is needed! We would like for every Auxiliary to be a contributor.

ELIZABETH BARR, *State Chairman*,  
AMERICAN MEDICAL EDUCATION FOUNDATION



## EDITORIAL

---

### Editorial Board

**D**URING the terminal months of his illness, Dr. Rucker's interest in the welfare of the Virginia Medical Monthly never fagged. His zeal for preparing editorials in the face of extreme suffering was amazing. His special capacity for preparing subject matter of historical interest cannot easily be replaced. Dr. Rucker was a man of great literary ability and unbiased vision.

To fill the gap left by Dr. Rucker's death, the President of The Medical Society of Virginia has appointed an Editorial Board which will operate as a subcommittee of the Publication Committee, incorporating the latter members into its body. Two objectives were sought: first, to seek out those with experience in the affairs of the Monthly, and secondly, to represent adequately the professional and scientific interests of the Society. The Editorial Board will prove of value in so far as it is active and wieldy. However, numerical restriction on its membership has not been imposed.

In planning the editorial section, the Board will select appropriate subjects for editorializing and choose well qualified individuals to prepare the editorials on these subjects.

Future issues of the Monthly will contain a calendar of coming state and nationwide events of interest.

Consideration is being given to improvement in the quality of reproductions if the cost does not prove prohibitive.

Suggestions from members of the Society concerning potential editorial material or concerning any of the various features of the Monthly will be greatly welcomed.

---

## SOCIETIES

---

### The Warwick-Newport News Medical Society

Met at the James River Country Club, Newport News, on January 12th. Dr. Cary G. Suter, Department of Neurology and Psychiatry, University of Virginia, spoke on "Modern Trends in Treatment of Epilepsy".

At the meeting on February 9th, Dr. Richard J. Ackart, Director, Virginia Medical Service, Richmond, spoke on "Recent Developments in Blue Cross and Blue Shield Programs".

New officers for 1954 are: President, Dr. William A. Read; vice-president, Dr. W. Ward Anderson, Jr.; and secretary-treasurer, Dr. F. Ashton Carmines.

### Tri-County Medical Society.

The regular monthly meeting of this Society was held in Windsor on January 26th, with Dr. T. A. Morgan, Franklin, presiding.

Dr. George Carroll, Suffolk, presented a paper on "Causes of Sudden Deaths in Infants."

The following officers were elected: President, Dr. W. Holmes Chapman, Jr., Suffolk; vice-president, Dr. J. A. Payne, III, Sunbury, N. C.; and secretary-treasurer, Dr. L. J. Stetson, Suffolk. Drs. T. A. Morgan, Franklin, F. I. Steele, Windsor, and J. M. Habel, Jr., Suffolk, are members of the Executive Committee.

#### **Mid-Tidewater Medical Society.**

At the regular meeting in West Point on January 26th, under the presidency of Dr. H. L. Shinn, Hallieford, a report of the Medical Service Committee of The Medical Society of Virginia was given by Drs. Charles M. Caravati and Thomas Murrell, Jr., both of Richmond. Dr. Russell Buxton, Newport News, spoke on Cancer of the Bowel, and there was a Panel on Geriatrics with Dr. Robley D. Bates, Newtown, as moderator. Discussants were Drs. William Johns, George Fultz, William Jordan, and Wellford Reed, all of Richmond.

#### **Buchanan-Dickenson County Medical Society.**

At the regular meeting of this Society, held at Grundy on January 20th, the following officers were elected: President, Dr. W. A. Cover, Big Rock; vice-president, Dr. Lewis Aaron, Grundy; and secretary-treasurer, Dr. James S. Richardson, Grundy.

#### **Danville-Pittsylvania Academy of Medicine.**

New officers of the Academy are Dr. John W. Hooker, president, and Dr. Jefferson D. Beale, secretary. Both are of Danville.

#### **Fredericksburg Medical Society.**

At a meeting on January 19th, the following officers were elected: President, Dr. Thomas B. Payne; vice-president, Dr. Henry Bernstein; and secretary-treasurer, Dr. E. Lee Earnhardt.

#### **Albemarle County Medical Society.**

Dr. E. C. Drash was elected president of this society at the January meeting, and Dr. Cary Moon is secretary.

#### **Lynchburg Academy of Medicine.**

At the regular monthly meeting of the Academy, held on January 11th, the following officers were elected: President, Dr. John R. Saunders; president-elect, Dr. A. D. F. White; vice-president, Dr. Frank R. Whitehouse; and secretary, Dr. Frank N. Buck.

#### **The Bedford County Medical Society**

Has elected the following officers for 1954; President, Dr. J. G. Jantz; vice-president, Dr. W. G. Hardy; and secretary-treasurer, Dr. W. V. Rucker.

#### **Virginia Peninsula Academy of Medicine.**

At the regular meeting held on January 20th, Dr. George Cooper, University of Virginia, spoke on "Limitations of Roentgen Diagnosis."

Dr. Chester D. Bradley is president of this society and Dr. W. T. Watkins, Jr., secretary-treasurer. Both are of Newport News.

#### **Fairfax County Medical Society.**

A meeting of this Society was held on January 12th in the office of Dr. Robert C. Hunt, Falls Church. The guest speaker was Dr. William Dolan, Chief of Laboratory Services at the Arlington County Hospital, his subject being Clinical Application of Newer Laboratory Procedures.

#### **The Richmond Academy of Medicine,**

Section on The History of Medicine, held its annual meeting on February 9th. The program was as follows: "Changing Concepts in American Medicine Over Three Centuries" by Dr. Richard H. Shryock, Institute of the History of Medicine, Johns Hopkins University; and "Richmond Hospitals—1861-1865" by Dr. A. L. Herring, Jr., Richmond.

#### **Smyth County Medical Society.**

Officers of this Society for the year 1954 are: President, Dr. Joseph J. Eller, Marion; vice-president, Dr. Walter Schiff, Marion; and secretary-treasurer, Dr. James A. Soyars, Saltville.

---

## **NEWS**

### **"Southern AMA Special".**

Physicians of the Medical Association of Georgia are arranging, through the Moyers Travel Bureau of Atlanta, a scenic 8,000 mile tour—20 days of educative vacation with five days in San Francisco for the

AMA meeting—and physicians in other states are invited to join them. This special train will leave from Atlanta on June 13th and will stop in New Orleans, San Antonio, El Paso, Juarez, Grand Canyon, Los Angeles, and then on to San Francisco

for the meeting. It will leave San Francisco on June 25th and go to Seattle, Vancouver, Lake Louise and Banff, arriving back in Atlanta on July 2nd. The rate for this all-expense tour will be \$445.00 and anyone interested should contact the Moyers Travel Bureau, 34-38 Peachtree St., Atlanta, Ga.

#### **Richmond EENT Society.**

Officers of this Society are Dr. L. B. Sheppard, president, and Dr. Charles N. Romaine, secretary-treasurer. Meetings are held at the Commonwealth Club on the first Tuesdays of January, March, May, and October.

#### **Dr. Austin I. Dodson,**

Richmond, was guest speaker at the International Medical Association of Southwest Texas in San Antonio, January 26-28. He gave three lectures—Uretero Pelvic Obstruction; The Relationship of Surgical Diseases of the Kidney to Hypertension; and Injuries of the Bladder and Urethra.

#### **Virginia Society for Pathology and Laboratory Medicine.**

At a recent meeting the following officers were elected for 1954: President, Dr. S. Miles Bouton, Lynchburg; vice-president, Dr. Edward Levy, Norfolk; and secretary-treasurer, Dr. George J. Carroll, Suffolk. Dr. Arnold Rawson, Norfolk, was appointed counselor.

#### **The Virginia Surgical Society,**

At a meeting at the Homestead, Hot Springs, on January 16th, re-elected Dr. Randolph Hoge, Richmond, as president. Dr. C. B. Morton, Charlottesville, was named vice-president; Dr. R. L. Payne, Jr., Norfolk, secretary; and Dr. W. R. Hill, Richmond, treasurer. The Society's council will consist of the officers and Drs. R. P. Bell, Jr., Staunton, E. P. Lehman, Charlottesville, E. M. Horgan, Winchester, and I. A. Bigger, Richmond.

#### **Dr. W. R. Whitman, Jr.,**

Has been appointed Assistant Chief Surgeon of the Norfolk and Western Railway Company with office at Roanoke.

#### **Richmond Academy of General Practice.**

Dr. W. Linwood Ball was installed as new president at the January meeting. Dr. F. Elliott Oglesby is president-elect; Dr. Harold I. Nemuth, vice-president; Dr. R. S. Faris, secretary; and Dr. J. C. LeFon, treasurer. Drs. Irwin Rifkin and George

G. Ritchie, Jr., were installed as directors for two-year terms.

#### **Dr. Herbert A. Porter,**

Formerly of Boisseau, has located at Pocahontas for the practice of medicine.

#### **Seminar and Conference on Cancer Cytology.**

Dr. Joseph S. Stewart, Chairman of the Third Annual Seminar and Conference on Cancer Cytology to be conducted by the Cancer Institute at Miami, Florida, announces that the conference will be held on April 21-24, inclusive.

This year the conference will bring together several leading authorities on cancer from this country and abroad. The last day will be devoted to a special session for medical practitioners, who will visit the Institute to see demonstrations on the taking and preparation of cytodagnostic tests for cancer of many types, with special sessions devoted to cancer of the uterus, breast, prostate, lung and stomach.

Full information may be obtained from Dr. F. Ernest Ayre, Director of the Institute, 1155 N. W. 14th Street, Miami, Fla.

#### **Dr. Victor C. Welch,**

Effective March 1st, will be located at the Veterans Administration Hospital, Perry Point, Md. He has recently been with the E. I. DuPont de Nemours Company at Waynesboro.

#### **Postgraduate Course for General Practitioners.**

The School of Medicine of the University of North Carolina announces a three-day intensive postgraduate medical course designed primarily for general practitioners to be held at Chapel Hill April 13, 14, 15. The course is similar to the one held last year and is entitled "Implications of Newer Diagnostic and Therapeutic Techniques." Physicians will again be given an opportunity to participate in the selection of specific topics for the program.

#### **Conference on Industrial Health.**

A conference on Industrial Health will be held at N. C. Memorial Hospital, Chapel Hill, N. C. on March 12, 1954. The conference is designed primarily for physicians who are providing part-time health and medical services to industrial establishments. The conference will be sponsored by the School of Medicine of the University of North Carolina in cooperation with the Committee on Industrial Health of the North Carolina Medical Society.



**The Southeastern Allergy Association**

Will hold its annual meeting at the Dinkler-Plaza Hotel, Atlanta, Ga., March 25-27. Dr. W. Lindsay Miller, Gadsden, Ala., is president, and Dr. Katharine Baylis MacInnis, Columbia, S. C., secretary-treasurer.

**American Geriatrics Society.**

The 11th Annual Meeting of this Society will be held at the Fairmont Hotel in San Francisco, just preceding the meeting of the American Medical Association. The scientific sessions will begin on the afternoon of June 17th and continue through the morning of the 19th.

The meeting will be open to all members of the American Geriatrics Society and to physicians and other scientists who are interested in the field of geriatrics. The program will cover many aspects of geriatric medicine, and there will be panel discussions on subjects such as recent developments in cardiology, methods of determining operability in older patients, and the relation of industry to geriatrics.

Dr. Lawrence W. Kinsell, Highland Alameda County Hospital, 2701 Fourteenth Avenue, Oakland 6, California, is in charge of local arrangements.

**American Goiter Association.**

The 1954 meeting of this Association will be held at the Somerset Hotel, Boston, Massachusetts, April 29, 30 and May 1. The program for the meeting will consist of papers and discussions dealing with the physiology and diseases of the thyroid gland.

Further information may be secured from Dr. John C. McClintock, secretary, 149½ Washington Avenue, Albany, N. Y.

**Pan-Pacific Surgical Association.**

Doctors are cordially invited to attend the Sixth Congress of the Pan-Pacific Surgical Association to be held in Honolulu, October 7-8, 1954, and are urged to make arrangements as soon as possible if they wish to be assured of adequate facilities.

An outstanding scientific program with over 100 leading surgeons, including sessions in all divisions of surgery and related fields, promises to be of interest to all members of the profession. An extensive social program is being developed for the doctors' families.

For further information, please write to F. J. Pinkerton, M. D., Director General, PAN-PACIFIC SURGICAL ASSOCIATION, Suite Seven, Young Building, Honolulu, Hawaii.

**Private Clinic**

Near Richmond desires part-time services of specialists in general surgery, EENT, radiology, obstetrics and gynecology, internal medicine, pediatrics, neurology and psychiatry, urology and dermatology. Full time services of one general practitioner also desired. Give full biography in first letter. Reply to Box 50, % Virginia Medical Monthly, Box 5085, Richmond 20, Va. (*Adv.*)

**Location Wanted.**

Young married general practitioner desires to relocate in eastern or central Virginia. Five years experience; two years in U. S. Navy and three in small town practice, with work predominantly in obstetrics. Prefer small city or town or association with older practitioner who anticipates retirement. Write "Location", care the Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

---

**OBITUARIES**

---

**Dr. Everett Idris Evans,**

Richmond, internationally known expert on burn surgery and traumatic shock, died in Washington, D. C., on January 14th following a heart attack. He was a native of Norfolk, Nebraska, and forty-four years of age. Dr. Evans received his Ph.D. in 1935 and his medical degree in 1937 both from the University of Chicago. He joined the staff in 1942 and had been professor of surgery at the Medical College

of Virginia and director of the surgical research laboratories since 1948. Dr. Evans' exhaustive research into care and treatment of burns carried him to the University of Edinburg in Scotland and the Royal College of Surgeons in London as a visiting lecturer in 1952. He was principal investigator for the research and development board of the Army Surgeon General's office and also served as surgical consultant to the Atomic Bomb Casualty Commission,

Far East Command (Japan), and was chairman of the National Research Council's committee on burns. Because of Dr. Evans' studies on traumatic shock during World War II, the Army began treating shock with whole blood instead of plasma. He was awarded a certificate of appreciation by both the Army and the Navy in 1948 for his contribution to scientific research.

Dr. Evans was a member of Alpha Omega Alpha and Sigma Xi, honorary medical fraternities. He held membership in many medical organizations, both national and international, and had been a member of The Medical Society of Virginia for ten years. His wife and three children survive him.

**Dr. Charles Howard Baker,**

Chilhowie, died at the home of his son in Donaldsonville, Georgia, on January 12th. He was seventy-nine years of age and a graduate of the University of Virginia, School of Medicine, in 1900. Dr. Baker began his practice in Grahams Forge but later moved to Chilhowie, where he practiced for thirty-one years. He had been retired for about sixteen years. Dr. Baker was a Life Member of The Medical Society of Virginia, having joined in 1900.

**Dr. Nathaniel Fulford Rodman.**

Well-known physician of Norfolk, died January 14th, having been in failing health for more than three years. He was a native of North Carolina and sixty-three years of age. Dr. Rodman graduated from the Jefferson Medical College in 1914 and had practiced in Norfolk for more than thirty years. He had been a member of The Medical Society of Virginia since 1916. His wife, a son and two daughters survive.

**Dr. William Oscar Neal,**

One of the oldest practicing physicians in his section died at his home at Chatham Hill, January 8th, death being due to cerebral hemorrhage. He was seventy-seven years of age and had practiced in that county for fifty-two years. He attended Emory and Henry College and graduated in medicine from the University of Virginia in 1901. He was a Life Member of The Medical Society of Virginia and also of the American Medical Association. He had been a member of the Tazewell Lodge A.F. & A.M. for forty-five years. His wife, two sons and several grandchildren survive him.

**Dr. Robert Alexander Warren,**

Hot Springs, died December 19th after an illness

of several years. He was eighty-one years of age and received his medical degree from the University of Maryland in 1907. Dr. Warren had been a member of The Medical Society of Virginia since 1909.

**Dr. J. Walker Jackson,**

Machipongo, died January 14th, at the age of sixty-nine. He was a graduate of the former University College of Medicine, Richmond, in 1909. Dr. Jackson had been a member of The Medical Society of Virginia for forty years. His wife and a son survive him.

**Dr. Julius Dreher Willis,**

Roanoke, died in his office following a heart attack on January 29th. He was sixty-seven years of age and graduated from the Medical College of Virginia in 1909. Dr. Willis had practiced in Roanoke for more than forty years. He had been a member of The Medical Society of Virginia since 1909.

**Dr. Horace G. Longaker,**

Newport News, died February 7th at the age of sixty-one. He was a graduate of the Jefferson Medical College in 1915 and was director and chief surgeon of the Newport News Shipbuilding and Dry Dock Company for thirty years, having retired four years ago. Dr. Longaker was a member of The Medical Society of Virginia for twenty-three years. His wife and two sons survive him.

**Dr. Milton Buell Coffman,**

Richmond, died February 6th, following a heart attack though he had been in ill health for some time. He was sixty-nine years of age and a graduate of the Hahnemann Medical College in 1906. Dr. Coffman began his practice in Richmond as a general practitioner. He served during World War I with the Twelfth Royal Irish Rifles and was awarded a British Military Cross. Upon his return to Richmond, he specialized in ear, nose and throat. Dr. Coffman had been a member of The Medical Society of Virginia for six years. His wife and a daughter survive him.

**Dr. Howard Calvin Cain**

Died at his home in Schuyler on January 13th at the age of fifty-three. He was a graduate of the Medical College of Virginia, following which he practiced for some time at Orange. Dr. Cain was formerly a member of The Medical Society of Virginia. A son survives him.

### Dr. William Tate Graham.

WHEREAS God, in his infinite wisdom, has called to his eternal reward William Tate Graham on the 13th of December 1953, and

WHEREAS the Richmond Academy of Medicine is deeply bereaved at the passing of this exemplary member

BE IT RESOLVED that in Dr. Graham's death, the Academy has lost a sincere friend, a loyal and true member; one of the "old school" whose contagious personality and keen interest will be greatly missed, and

THAT in being Virginia's and Richmond's pioneer orthopaedic surgeon who settled here in 1913, and who was appointed to the Professorship of Orthopaedic Surgery of the Medical College of Virginia in that same year, which was the year of consolidation of the two medical schools of this city, and whose keen interest in crippled children caused him to be known through the State and the South, and through such devotion founded the Crippled Children's Hospital of this City

THAT whose interest in prevention of disease, as well as his skill as an orthopaedic surgeon caused him to be appointed to the Virginia State Board of Health in 1923, and who became its President in 1926, which position he held until his death.

Dr. Graham was a man with a warm personality, a gifted and beloved teacher, a conservative and devoted surgeon, one endowed with a keen sense of humor, unsurpassed patience which served him so well in his chosen specialty, and so beautifully exemplified by his attitude during his own long and painful illness. He had a deep love of people with whom he always made friends, a spiritual devotion that was unique and exemplary, and in the passing of such a striking person, be it assured that he will be greatly missed.

THAT we extend to his family our deepest sympathy in their loss, and

BE IT FURTHER RESOLVED that this resolution become a part of the permanent records of the Academy of Medicine, that they be published in the *Virginia Medical Monthly*, and a copy be sent to his family.

JAMES T. TUCKER

JOHN P. LYNCH

H. PAGE MAUCK, *Chairman*

### Dr. John Fulmer Bright

Was born in Richmond November 17th, 1877. His father, Dr. George H. Bright, an active practitioner of this City for many years, was a native of South Carolina and a graduate of Jefferson Medical College in the class of 1858. His mother, Mary Davies Bright, was a lineal descendant of the noted Presbyterian divine Samuel Davies.

From the public schools of Richmond Dr. Bright entered the Medical College of Virginia and, from that institution, received the degree of M. D. in 1898. He began practice immediately and the following year became connected with the College as instructor in anatomy which, at that time, was one of the most important subjects in the cur-

riculum. In 1906 he was made head of this department, a position he held until 1911, when he was succeeded by a full time teacher. Students of that day will recall Dr. Bright as an outstanding figure in a group of impressive personalities that made up the faculty. Endowed with a phenomenal memory and a remarkable facility of expression, his lectures and demonstrations illuminated a subject that was often otherwise dull, while his genial manner and ready wit endeared him to students and colleagues alike. Since his resignation in 1911 he has been Professor Emeritus of Anatomy.

Though he continued in practice for some twenty-four years, Dr. Bright's talents and interests led him into other fields. Entering the National Guard in 1907 as a medical officer, in 1921 he became Commanding Officer of the first Virginia infantry and retired in 1941 with the rank of Brigadier General. In 1922-1924 he served in the Virginia House of Delegates and, in 1924, was elected Mayor of Richmond. This post he filled with great distinction for sixteen years, a period longer than that of any other mayor in the City's history. During this tenure of public office he came to be regarded not only as an able and gracious administrator but also as one of the most gifted speakers of his generation. In 1941 he became assistant coordinator of the State Defense Council and, in 1942, director of the Federal Office of Price Administration. Since 1950 he had been medical advisor to the State Industrial Commission. In each of these positions his activities were characterized by a deep sense of public duty and forthright espousal of the course he thought to be right, regardless of whether or not it was popular. There was never any doubt as to where he stood on the issues with which he was confronted.

Dr. Bright became a member of the Academy in 1901 and, for many years, took an active part in its sessions. After retiring from practice he retained his membership and often attended meetings. In legislative matters his aid and counsel were frequently sought and always cheerfully given. Though his health had been failing for some time his mind remained clear and he was able to attend to his duties and take part in public discussions until shortly before his death which occurred suddenly on December 29th.

BE IT THEREFORE RESOLVED: That in the death of Dr. Bright, the Academy has lost one of its most conspicuous and talented members and the City one of its most useful and devoted citizens. Though his distinctions were largely won in fields other than medicine, the profession claims him with pride and it is with deep sorrow that his colleagues record his passing.

BE IT FURTHER RESOLVED that a copy of this resolution be spread on the minutes of the Richmond Academy of Medicine, a copy sent to the members of Dr. Bright's family, and a copy forwarded to the *Virginia Medical Monthly*.

E. T. GATEWOOD

C. L. OUTLAND

J. M. HUTCHESON, *Chairman*



*One of a Series of Newspaper Ads.  
Directed to Your Patients  
and Our Customers....*

THANKS TO MODERN MEDICINE



he lived  
to tell  
the tale!

No STORY TOLD by grandfather is more dramatic than the one which recounts how his days have been lengthened by modern medical progress. Advances in geriatric medicine, and new drugs for the aged, help make twilight years healthier and happier.

Today's children owe a debt to modern medicine. New skills and new drug developments give their generation an average life expectancy of 20 years more than children had who were born 40 years ago.

These benefits and other modern medical advances are yours in PEOPLES CERTIFIED PRESCRIPTIONS, compounded by PEOPLES pharmacists—skillfully, accurately. And your prescription is priced with uniform economy at any PEOPLES SERVICE DRUG STORE.



*Certified*  
**PRESCRIPTIONS**  
*...just what the doctor ordered*



# Confidence that grows with time

Only Dextri-Maltose enjoys a record of forty-three years of consistent and outstanding clinical success. No other carbohydrate for infant feeding has earned such worldwide acceptance and confidence in its constant dependability. Research continues to establish that whole milk and Dextri-Maltose formulas provide optimal nutrition for uncomplicated growth and development of infants.

**Dextri-Maltose**  
*does make a difference...*

In bacteriologic safety  
In convenience  
In preventing "sweet tooth"  
In true economy

# DEXTRI-MALTOSE

THE CARBOHYDRATE OF CHOICE FOR INFANT FORMULAS



MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

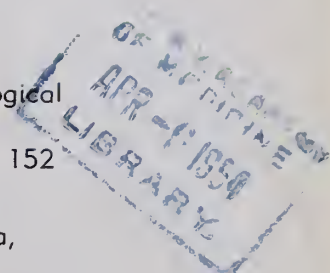
# VIRGINIA

## MEDICAL MONTHLY

### *Contents*

- The Rehabilitation Problem, Charles S. Wise . . . 143
- Physiological Mechanisms Underlying Rehabilitation of Neurological Disorders, Walter O. Klingman . . . 146
- Emotional Significance of Severe Trauma, Benedict Nagler . . . 152
- Disability Control, Herbert W. Park . . . 156
- Maintenance and Restoration of Function in Severe Trauma, George A. Duncan . . . 159
- Complications in Surgery, Due to Abnormalities in Blood Volume, with Special Reference to the Syndrome of Polycythemia, Henry L. Birge . . . 161
- Panel Discussion on the Treatment of Malignant Lymphoma, Byrd S. Leavell, James R. Cash, Allen Barker, H. St. George Tucker, Jr. . . . 166
- Clinicopathological Conferences, Gordon Hennigar, Wm. R. Kay . . . 171

(Continued on page 6)



FOR COMMON BACTERIAL INFECTIONS IN CHILDREN

# ILOTYCIN

(ERYTHROMYCIN, LILLY), ETHYL CARBONATE

# PEDIATRIC

PALATE-PLEASING • EFFECTIVE

ILOTYCIN • THE ORIGINAL ERYTHROMYCIN



truly one of the world's



The widespread and discerning use of a medicinal product by physicians, in hospitals and in private homes—by day and by night, and in the treatment of patients of all ages—constitutes, we believe, the true proving

# Virginia Medical Monthly

Vol. 81, No. 4  
WHOLE No. 1222

RICHMOND, VA., APRIL, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## THE REHABILITATION PROBLEM\*

CHARLES S. WISE, M.D.,

Professor of Physical Medicine and Rehabilitation,  
The George Washington University School of Medicine,  
Washington, D. C.

The rapid and dramatic advance in medicine and surgery during the past half century paradoxically leaves in its wake a new and important medical, social and economic problem. We meet here today to discuss this problem of rehabilitation. This is not a unique historical sequence. Almost every major scientific development is followed at a later date by social and economic after-effects. These sequelae are not always recognized early enough. It is certain that the pioneers in improved surgical techniques—immunization, insulin, and antibiotics—to mention but a few milestones, little appreciated the social and economic after-effects of saving and extending life. To illustrate this point briefly, at our present rate of accumulating greater numbers of disabled and aging persons, it is estimated that by 1980 for every able bodied worker in America there will be at least one person physically disabled, chronically ill, or over the age, sixty-five, to be supported. Economists state that this is a completely infeasible situation.

Can we conserve our most valuable resources, our human resources, during the next two critical decades? This is the problem of rehabilitation, this is the problem we meet today to discuss. We might first ask ourselves, do we have the technical knowhow to cope with the medical aspects involved in rehabilitation? The answer is yes, to a considerable extent. I do not infer that further research in medicine and related fields is not essential. We can state with assurance, however, that with our present level of knowledge we can reduce by an appreciable margin the two to six million disabled workers already in our midst, as well as the two hundred and fifty thousand disabled workers added annually. We then ask, what are the obstacles preventing every

disabled person from being restored to maximum usefulness to himself and his community? In brief, the obstacles are limitations in personnel, facilities and funds. The solution does not lie in the vain hope of some momentous medical discovery which will erase disability and chronic disease from our nation. The solution does lie in the joint and effective action of the medical profession, the community, industry, labor, private and government agencies related to this problem.

Let us explore briefly the factors involved in the limitations of personnel, facilities and funds, which prevent a solution to the overall problem. The supply of trained personnel is pitifully short in every phase of the rehabilitation team. From the physician down through all the ancillary personnel we cannot today adequately staff the existing institutions where rehabilitation activities are in progress. There are, for example, less than two hundred physicians trained in the field of physical medicine and rehabilitation today. Although progress is being made, the supply is woefully short. There are less than six thousand physical therapists and about three thousand occupational therapists employed today. It is conservatively estimated that twice these numbers would be the minimal number needed to meet our present needs, despite the limited facilities available. The problems in this matter lie not in insufficient schools for training, but in limited recruitment of students to these fields. More effective methods of recruitment of qualified personnel in all these phases is needed. Vocational counselors, specifically oriented toward rehabilitation, also are rare individuals today, and many more will be required if progress is to be expected in a nation-wide total rehabilitation program.

Aside from skilled personnel devoting full time toward rehabilitation, there is urgent need in our

\*Read by invitation before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953, as part of the Rehabilitation Symposium.

medical schools and post-graduate studies for placing greater emphasis on the rehabilitation aspect in a variety of specialties. In the last analysis, the greatest number of severely disabled or chronically ill patients throughout the country will be seen by the general practitioner, who will begin the rehabilitation program early in the course of treatment.

To meet this particular challenge the National Foundation for Infantile Paralysis, for example, has already appropriated substantial support to four medical schools to establish pilot studies in methods of teaching rehabilitation techniques at all levels of medical education. At our own institution, The George Washington University School of Medicine, this pilot program has already begun and is creating an effective pattern of teaching and practicing the "team approach" toward rehabilitation of the more severely disabled or chronically ill patient. The cooperation of the various specialty departments at the hospital and the medical school is most gratifying. Until the slow process of training more personnel in the medical and ancillary fields fulfills our needs, and this does not seem likely in the foreseeable future, progress should be encouraged by utilizing less skilled aids to assist the professional workers wherever possible. These are but a few highlights of the problems facing us now as we attempt to expand our numbers and utilize more efficiently the professional people in the field of rehabilitation.

Although encouraging attempts are being made to meet this problem, there is need for neither complacency or pessimism in regard to the staffing of adequate facilities on a nation-wide basis.

The shortages of facilities and funds are closely related. Let us examine what we have and what is needed. The cornerstone for adequate care of the severely disabled patient is in what we term a rehabilitation center. No uniform pattern or model of a rehabilitation center can meet the needs of every community. The term "center" is used in a generic sense and describes a facility where some or all of the following services are provided: medical supervision, physical therapy, occupational therapy, counseling, psychological services, speech therapy, industrial fitness or manual arts therapy, social work, vocational training and possibly special services for the blind or the deaf. Few, if any, institutions will provide all of these services. A recent survey by the Office of Vocational Rehabilitation, in March of this year, listed only forty centers established throughout

the nation. Many of these centers have capacity for fifty or less patients.

Virginia, however, can be proud of the advances made by the Woodrow Wilson Rehabilitation Center in Fishersville in recent years. Although many problems still undoubtedly exist, more communities should study and learn the patterns developed at Woodrow Wilson Rehabilitation Center, of combined physical restoration, counseling and vocational training. The Division of Vocational Rehabilitation of Virginia should be congratulated for its pioneer work in this field.

Other centers may be connected with acute hospitals emphasizing the early stages of rehabilitation. In still other facilities the aspects of industrial fitness by means of special sheltered or curative workshops predominate. There is abundant need for all types of facilities. I feel, however, that it is most effective to combine as many services as possible in a single center, in order to effectively utilize a minimum number of trained personnel and allow for a more integrated rehabilitation service.

A most encouraging phase in planning rehabilitation centers is the recent work of the Hill-Burton Division of the Public Health Service. During the past two years this division has turned the attention of expert hospital architects, builders, administrators and medical specialists toward model facilities in physical construction and design for rehabilitation units in chronic hospitals, and are at present studying plans for separate rehabilitation centers. This will be of tremendous value to a community in estimating costs and design of rehabilitation centers to meet their individual programs.

Much more could be said about shortages of facilities, but perhaps it is secondary to the third and last major obstacle, shortage of funds. Not being an economist or financier, my estimates of the amounts needed for effective expansion of facilities and personnel would be meaningless. Far more capable estimators have claimed, however, that investment in rehabilitation yields the greatest returns, both financially as well as in the relief of human misery.

Here in Virginia, for example, at the Woodrow Wilson Rehabilitation Center, of the first four hundred and fifty-three cases completing the services offered, two hundred and seventy-nine entered employment at an annual earning of eighteen hundred and twenty-six dollars. The average cost per case



is only seven hundred and twenty dollars. The obvious return to the state by decreasing public assistance and future taxation bear indisputable evidence of the economic soundness of rehabilitation. On a federal level, it is estimated that for every dollar of federal support for the Office of Vocational Rehabilitation, the Government receives ten dollars in later taxable income. In brief, there is no question as to whether our nation can afford rehabilitation. It is becoming more evident each year that we cannot afford our present neglect of the disabled and older population.

Aside from financial support for expanding our facilities, the problem of cost and maintenance of rehabilitation facilities presents a major problem for most patients. Methods to meet these costs through expansion of benefits by private and voluntary health programs require public education and action. The ultimate approach to all these major problems lies in a cooperative effort at the community level. Whatever means are necessary to catalyze each local community to action must be found. Industry, labor, welfare organizations, both private and government, and medical groups, if sufficiently aware of the problem, must be coordinated to most effectively utilize existing facilities as well as for future planning. Over and above all the practical problems touched upon here today we have facing us a great moral chal-

lenge. A fundamental principle of our moral values in a democratic society lies in the respect we share for the dignity of the individual. In no other way can we as a nation more dramatically illustrate this democratic principle than in the rehabilitation of our many thousands of potentially useful citizens.

May I close by quoting from John Galsworthy, who, in speaking of the restoration of the disabled shortly after World War I, said—and I quote—“That this is a hard task none who knows hospital life can doubt. That it needs special qualities and a special effort, quite other than the average range of hospital devotion, is obvious. But it saves time in the end, and without it success is more than doubtful. The crucial period is the time spent in the hospital. Use that period to recreate not only the body but mind and will power, and all shall come out right; neglect to use it thus and the heart of many a sufferer and many a would-be healer would break from sheer discouragement. A niche of usefulness and self-respect exists for every man however handicapped; but that niche must be found for him. To carry the process of restoration to a point short of this is to leave the cathedral without a spire. To restore him, and with him the future of our countries, that is the sacred work”.

*901 23rd Street, N.W.*

Other papers in the REHABILITATION SYMPOSIUM are those which follow by  
Drs. Klingman, Nagler, Park and Duncan.

---

## PHYSIOLOGICAL MECHANISMS UNDERLYING REHABILITATION OF NEUROLOGICAL DISORDERS\*

WALTER O. KLINGMAN, M.D.,

University of Virginia  
Charlottesville, Virginia

In the neurological field rehabilitation is attempted in a variety of disturbances. Notably are hemiplegia, paraplegia, cerebral palsy, aphasia, multiple sclerosis, speech and reading disabilities other than those associated with aphasia, Parkinsonism and poliomyelitis. The possibility for greatest help occurs in hemiplegia, paraplegia, cerebral palsy, poliomyelitis and the speech and reading disabilities. Less favorable types of disturbances are cerebellar lesions, multiple sclerosis, Parkinson's disease and progressive deteriorating disorders of the presenile group or the hereditary degenerative disorders such as muscular dystrophy or atrophy, Wilson's disease, Huntington's chorea and progressive circulatory disorders of the central nervous system.

Subacute and chronic neurological disorders are very frequently neglected upon the assumption that therapy is futile. This has probably come about because of lack of specific curative agents for many of these disorders and from the fact that chronic lesions of the nervous system physically disable the individual in his work to the extent that he must be replaced, become a complete invalid and ultimately be confined to a restricted life, to bed or be referred to an institution for the chronically infirm or disabled.

Regardless of the nature of the disabling lesion there is always hope for some type of rehabilitation, whether it be that of self care, improvement in ambulation and personality adjustment except in all but markedly deteriorated cases. The home situation, the attitude toward the family, family attitude toward the patient, and social and economic resources play tremendous roles in achieving success or determining failure.

It goes without saying that one evaluates each case as a whole. One must evaluate the patient medically, neurologically and particularly from the psychiatric standpoint and then fit the results into the social, environmental background, and, if possible, deter-

mine then what occupational and vocational facilities are available and can be utilized.

For years neurologists, orthopedists, and physical therapists have utilized and devised methods for refitting or rehabilitating individuals with disabling neurological lesions. In more recent times the evolution and development of training centers or clinics for the victims of cerebral palsy and poliomyelitis have brought these methods to the attention of the medical profession and the public at large. Even more recently the war gave a terrific impetus to rehabilitation with the result that it publicized and popularized the work which has been part and parcel of neurological, orthopedic, and physical medical work ever since these special fields existed. It is very similar in this respect to the pseudo specialty of psychosomatic medicine which likewise enjoyed a parallel course of development and expansion and was offered to the profession and public as a new approach to medical problems, whereas for years every practitioner and psychiatrist was treating psychosomatic problems. Now that this relationship has been given a very euphonic name it suddenly has become acceptable to individuals who had considerable hostility to psychiatry and something psychosomatic is now discussed in the best of circles with no personalization of one's difficulties. So, too, physical medicine and rehabilitation have passed into a big time era. Development of centers within the Armed Forces, Veterans Administration hospitals, special clinics and facilities in the teaching centers and private hospitals are now well known sources of help for the chronically disabled neurological patient.

There are three primary parts in the retraining program of neurologic patients. The first consists of a complete medical evaluation of the patient. This includes complete medical survey aside from the evaluation of degree of residual nervous system change. In addition, the mental capacity and personality structure must be considered, especially evaluation of the patient's pre-illness personality *versus* the estimation of the individual's personality reaction to his illness. These studies then must be considered

\*Read as a part of the Rehabilitation Symposium at the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953.

in terms of the patient's social and vocational situation. Probably the most important observation of this primary part of the retraining program is the estimate of the individual's interests, motivating forces, desire and determination to adjust to or improve his state of disability. Equally important is the information concerning the patient's home situation and the family can be most helpful to the patient and physician. Lack of cooperation on the part of the family is often the result of not understanding its role rather than an unwillingness to be of help.

The second phase of the rehabilitation program for the chronic neurological case consists of establishing a definite goal for the individual. This obviously must be set for each individual and varies with the situation, age, degree of disability, mental capacity or deterioration. However bad some things may be, certainly some goal can be established even if it is nothing more than teaching the individual self confidence—ability to go about, feeding and dressing himself, going to the toilet. In others, one is more hopeful of reaching a point where achievement may be rewarded with some economic values for the patient.

The third phase of the rehabilitation program is one of maintaining the program already set in motion by the first two phases. The guidance, sympathy and direction of the patient, supervision of general medical procedures that may be complications of the neurological difficulties such as cardiac decompensation, bladder and bowel care.

It has been estimated that improvement of the patient can be hoped for in about 75% of patients from neurological retraining programs if the physician and family are willing to spend some time and effort at it and mobilize the local resources aimed toward the therapy of the individual. The individual must also have the inherent capacity to strive for improvement and adjust to his disability.

It is not my purpose to recite to you the various conditions and varied procedures and maneuvers that are carried out for improving specific neurological disorders. These can be witnessed any time and observed much more vividly by attending a single session of any physical medicine department's therapy activity. It has been estimated that man in his normal state of health is utilizing approximately only 1/10th of his brain and nervous system resources.

Therefore, it might be well to consider how the mechanisms which permit us to carry on, develop, utilize and educate unused portions of our nervous system when some adversity strikes us down by deranging certain nervous system mechanisms and what reserve parts or emergency systems can be thrown into action. Neurological disorders enjoy a unique position for that reason in the rehabilitation effort. The lesions are often static and compensating neural mechanisms may be available.

The brain is not a single nerve center but a collection of nerve centers inherited from ancestors that lived in many, many years past. Its arrangement is similar to the earth's layers of rocks, the most recent layers lie on the surface and the ancient structures are piled underneath. We speak of this as the phylogenetic arrangement of the neuraxis, from spinal cord up to the most recent acquisition, the cerebral cortex, a sheet or layer of gray matter whose nerve fibers are contained in the cerebral hemispheres. If we pass down the various levels of the brain, it is similar to running a motion picture backwards, the various levels representing stages in the history of the brain and, in descending order, contain nerve centers which first appeared and still are present as high order centers in mammals, reptiles, amphibians and fish. Lowest in the scale is the spinal cord.

Careful, detailed, painstaking anatomical studies made possible by difficult laboratory techniques, indicate that many nerve fibers carry impulses from all parts of the human body to and from the cortex, the most elaborate organ in the body. The human cortex contains about twice as many cells (50 billion) as the highest ape. These cells form a highly integrated organization which is constantly in touch with millions of sense organs in the body. The brain learns by being informed constantly by the areas of the body that in turn are kept active by a continuous stream of impulses arising from the cortex and other centers.

For purposes of emphasizing the utilization of these mechanisms of the nervous system, it would be well for us to review the neuro-physiological mechanisms of the nervous system and see how the nervous system adapts itself to injuries in the various parts.

The nervous system arrangement for function is that of groups of systems, the coordinated function-



ing of these systems producing successful, smooth, coordinated, well controlled motor acts. These in turn are governed by three chief systems or mechanisms, the motor pathways, the sensory system and the coordinating system supplied by the cerebellar and mid brain structures. The peripheral nerves are important, too, but we would place emphasis on the other system. Disturbances in some of these systems may disorganize the function of other systems, such as a lesion in the extra pyramidal system setting up the mechanism for production of rigidity and tremor, a lesion in the posterior columns of the spinal cord disorganizing the proper coordination of muscle movements by removing the sense of position, a lesion of the cerebellum or cerebellar pathways providing a disturbance by removing the fine integrated coordination of muscle groups resulting in tremor or ataxia.

A characteristic of the nervous system is that symptoms of anatomical lesions vary according to the levels of the nervous system involved. The lower levels are more highly organized in that there is a high degree of perfection of action of neural elements with each other, but their functions are less modifiable than those of higher levels. There is, therefore, less possibility of the activity of other parts compensating or replacing their functions when lost or impaired.

In lesions of the conducting tracts and subcortical masses of grey matter there is greater opportunity for other systems to substitute, to some extent, at least, the functions which are lost or impaired.

In the cortex of the forebrain the relation of function to local structure is more variable. Certain functions are rigidly localized in highly specialized centers and destruction of such a center may abolish permanently the function it represented. This holds mainly for the receptive areas through which the cortex receives impressions from the inner or outer world. This is especially true of the visual cortex, where a minute lesion may cause serious or irreparable damage.

Localization is less discrete and rigid in cortical areas through which the brain initiates movement and other reactions. Injury of a small part of the motor cortex may produce little or no permanent disability. However, a distinction may have to be made between various categories of movement. Those which have been learned or acquired by experience are more

dependent on integrity of the cortex and suffer most severely when damaged. Such examples of retention of movements learned by experience and retained in the Parkinson state and utilized in the rehabilitation program are well known.

Complicated and highly integrated actions and forms of behavior are not represented as such in the forebrain, only their components depend on local areas. If certain of these are lost, their loss may disorganize or impair correct performance of the act as a whole. Nevertheless, crude abilities may be preserved and improvement in acts be developed by re-educational methods.

Interpretation of symptoms is often complicated by the capacity of the nervous system in adapting itself to changed conditions imposed on it by disease. Even if a flexor muscle is grafted to the tendon of an extensor muscle it may give up its lifelong habit of flexing a joint and learn to extend it. When the proximal end of one nerve is sutured to the distal portion of another of different function, it may, when regenerated, serve to innervate an entirely new set of peripheral organs. Similarly, when one reverses the position of the pen in one's hand, one can without much hesitation continue to write fairly accurately with the dorsum of the hand towards the paper, even though many movements are the reverse of what one normally uses.

The most important system involved in rehabilitation of the chronic neurological case is the motor system consisting of the corticospinal or pyramidal system and the extrapyramidal system (centers in brain stem, basal ganglia and efferent fibers from them). Under normal conditions, these two systems work together and efficiency of each depends largely on collaboration of the other.

Each motor nerve arising in the eventual distribution of this motor activity is from the final delivery system, the anterior horn cell, which innervates several muscle fibers, perhaps as many as 200, but the number varies. Smaller muscles and those used for delicate movements, such as ocular, receive relatively more nerve fibers.

Likewise, final distribution of nerve fibers from anterior horn cells intermingle in nerve plexuses, so that, when peripheral nerves are formed, each contains fibers from several roots. The distribution, therefore, of paralysis due to disease of cells of a ventral horn, or of a ventral root, may consequently

differ from that which results from injury of a motor nerve.

It was formerly assumed that all corticospinal nerve fibers took origin from the large Betz cells which are found in the precentral convolution of the cortex and that only fibers from this area constitute the pyramidal tracts. Recent studies show that the number of fibers in each pyramidal tract is 25 times the number of Betz cells in the corresponding hemisphere. Other fibers come from smaller cells of the motor area in neighboring regions, possibly also from post-central gyri as many fibers remain after both precentral and postcentral cortex of the hemispheres of the same side have been removed. The exact origin of many of these fibers is not yet determined, but they play a tremendous role in the compensation or retraining and rehabilitation program.

The cortical area for distal portions of the limbs (those parts employed in delicate and skilled actions) exceeds greatly those from which movements of the trunk and proximal parts of the limbs can be obtained.

If one stimulates points of the motor cortex it may provoke a movement, which can also appear when adjacent points are stimulated, either in a part of the cortex in front or from an adjacent point that ordinarily produces another movement. Under certain conditions even an opposite movement may be elicited.

These divergences are known as facilitation of response, reversal of response, and deviation of response, and indicate functional instability of cortical motor points and form the basis of adaptive capacity in rehabilitation in lesions involving the motor cortex. The cortex is, therefore, a plastic or labile organ and it is on this property that unrivalled power of learning by education and experience depends. A man may acquire more new and skilled acts. Furthermore, there is an overlap of regions from which movements of different parts of the body can be obtained, even of the fingers and toes. The cortex is no longer looked upon as an effector mechanism which merely transmits preformed patterns of innervation down to the spinal cord.

Another feature of nervous system organization important in rehabilitation is that the cortex has a tendency for strong or prolonged excitation of one of its excitable points to spread to neighboring points

or even a whole motor area, and it may produce a series of movements in a sequence.

The cortex normally has its power of initiating and executing fine and skilled voluntary movements by having lower motor mechanisms under its control. This it does by impulses which modify or suppress subcortical reactions which would interfere.

The second important system of pathways is that of the sensory system. Sensory impulses enter into the functioning systems by influencing motor cortical acts and these support or augment its activity. The integrity of cortex, therefore, is necessary for isolated movements and delicate and finely coordinated acts.

In regard to aphasia, much of our hope in retraining depends on the functional capacity of the minor cerebral hemisphere because speech involves a two hemisphere arrangement with one hemisphere being the dominant or controlling one. This holds true for handedness as well as for speech.

The hemiplegic comprises one of the largest groups of the neurologically disabled but he often has the best chance because he has a stationary brain lesion and he can learn good gait and self care in approximately four months time.

The third great system involves cerebellar and cerebellar pathways. Lesions are much more complicated here and the outlook for help in lesions involving these structures is not so good for the reason that the lesion is usually progressive and most often due to multiple sclerosis. If the lesion is static, however, improvement can be expected, particularly from corrective procedures developed through the visual optic and also motor system facilities.

Lesions of peripheral nerves usually have a good prognosis as the nerve elements may regenerate, and, if the limb is maintained in good condition, recovery possibility is good.

Spinal cord lesions resulting in paraplegia with both legs involved, with bladder and bowel disturbance but with good upper limb function, also have a fairly good rehabilitation chance. Spinal cord lesions involving various areas due to circulatory or nutritional disturbances are treated accordingly. Those with anterior horn cell change similar to polio and those with dorsal and lateral column

change similar to paraplegia and cerebellar disturbance.

The major chronic neurological disorder is often that of the problem of cerebral vascular accidents or strokes. Strokes are now the third major cause of death, ranking only behind heart disease and cancer. Despite the high incidence of death following acute development of strokes there are an estimated total of 1,500,000 persons in this country who have survived such an accident but are suffering from varying degrees of paralysis of one side of the body.

Aside from the paralysis of one side of the body there may be an associated involvement of the speech centers resulting in aphasia. Both of these results from cerebral vascular accidents have a profound effect upon the individual because frequently he is spared the stress and strain of daily gainful activity and leads a protected life and thus is preserved for many more years, estimated as a 90% chance of a life expectancy common to the same age group, but faces these years with what has and is by many individuals considered to be a hopeless situation. Often-times it has resulted in the patient being relegated to the hospital for chronic disorders or kept in the offing in the home, protected and shielded from family and friends. Where facilities are available it has been shown that about 75-90% of the victims of strokes can live at home and meet their daily needs and about 40% are able to return to their former or some other gainful work despite the fact that the average age group for the stroke group is in the early sixties.

One cannot pass the matter by without mentioning the tremendous need for facilities and personnel to help rehabilitate speech and reading disabilities associated with strokes. It is one of the most unfortunate and glaring errors in our present day educational program that even the school systems make so little or no provision for help for the child who has a speech and, even more important, a reading disability. The latter condition frequently goes unrecognized and the child then becomes penalized by being considered ignorant and unsuited for schooling. Some of these situations result in the child ending up as a delinquent or a psychopath because of its efforts to compensate by developing socially unacceptable traits and characteristics. There are so few available to help with the aphasic indi-

vidual or the child with a speech or reading disability.

It is most important that in all problems of rehabilitation and preservation of the neurological cases, the family must be made to participate in the program from the earliest appearance of the illness, even if it means that they come into the hospital to help fit the program.

As a matter of interest, figures are available from many hundreds of cases as to what can be accomplished in neurological disorders. The average hospital stay for this number of cases was 74 days—self care gain being accomplished in hemiplegia in 77 days, 10 days in cases with ataxia, 20 days in cases with multiple sclerosis. Parkinson's disease, flaccid paralysis, and other disorders have a longer period of rehabilitation gain.

Well conducted studies show that the physically handicapped worker, when selectively placed on the basis of matching physical capacity against the physical demands of the job, has fewer accidents, less labor turnover, less absenteeism, and equal or better production rates than the so-called normal worker beside him in the same job.

Medical men must realize that medicine's big problem no longer is that of the acute infection or acute communicable disease, but is the chronic disease problem and the disabilities which they leave. The advances in medicine have resulted in this disproportionate medical problem of care for the chronic disabilities, many of them of neurological nature.

Outside of the military services and the Veterans Administration and relatively few physical medicine and rehabilitation units in civilian hospitals, there are but a handful of organizations equipped to provide for the patient with a neurological disability. One of the finest and one which every Virginia physician should feel proud of is the Woodrow Wilson Rehabilitation Center at Fishersville, which fills a tremendous need not only for the handicapped from this state but is also utilized by individuals from many other states. Another is the facility furnished at the Medical College of Virginia in Richmond. Another is the unit at the McGuire V-A Hospital in Richmond, one at Kecoughtan, and one right here at the V-A Hospital in Roanoke.

We as physicians overlook a tremendous responsibility in adhering to an attitude or basic philosophy



that the assignment is completed when the acute illness or surgery has been completed, neglecting the integral part of medical care that is embodied in the rehabilitation service to the patient. To the neurologist this is not a new problem because it has always offered one of the oldest therapeutic tools known to medicine in the care of the chronic neurological case, yet the general problem of rehabilita-

tion has become a relatively new specialty in other fields. The unique adaptation faculties of the nervous system structure and physiology stand out in this respect in rehabilitation work. The underlying mechanisms with their compensatory, accessory systems, generally leave some opportunity for improvement by faithful application of psychiatric, neurologic and physical medicine principles.

### Night Driving Hazards.

Use of tinted glass in automobiles or the wearing of colored glasses for night driving is dangerous because it causes decreased visual efficiency, in the opinion of Dr. Paul W. Miles, St. Louis.

"Particularly unfortunate is the popular selection of pink for the glasses and aquamarine green for the windshields," Dr. Miles wrote in the Archives of Ophthalmology, published by the American Medical Association. "While pure red and pure green filters may be quite transparent, in combination they are opaque."

Night driving is a similar visual task to walking into a dark movie theater. When a person first walks into a dark movie theater there is poor visibility of the seats until the eyes have adapted themselves to the dark although the screen can be seen very well.

In night driving, every change from light, such as headlights, to dark and from dark to light requires a new adaptation of the eyes. This adaptation process is so slow that if it occurred in a dark movie theater the seats forever would remain black against black, just as the objects at a distance or the shadows appear on the road.

"As the driver studies the road at the distance

limits of the headlights, he constantly tests his visual thresholds," Dr. Miles said. "Objects come into view, attract attention, and are finally identified, as the automobile rapidly approaches. Under threshold conditions, an image may form on the retina 50 times and be so weak that only 25 attention responses follow. Any decrement in illumination or visual efficiency during high-speed night driving could delay reaction enough to result in a serious accident.

"Modern windshields were made green because large areas of glass let in too much heat from the sun. A green filter cuts out the red and infrared rays which carry heat. For purposes of night driving this windshield color becomes the worst possible selection, because automobile headlight is unbalanced. Almost two-thirds of headlight energy is concentrated in the red end of the spectrum, and only one-third is in the range to which a green windshield is most transparent."

"Green windshield glass should be in a separate layer, to be moved aside for night driving. Persons with defective vision, including color blindness of the common type, should be advised to add auxiliary headlights to their automobiles and to avoid any type of tinted glass for night driving."

## EMOTIONAL SIGNIFICANCE OF SEVERE TRAUMA\*

BENEDICT NAGLER, M.D.,

Chief, Neurology Division, Psychiatry and Neurology Service, Veterans Administration,  
Washington 25, D. C.

The concept that sickness of the body influences the mind is thousands of years old. We all remember the Latin proverb—"Mens sana in corpore sano"—a healthy mind in a healthy body. It is expected that adverse changes in the body structure will cause disturbances of the harmonious inter-relations between psyche and soma and so effect a psychological reaction.

When discussing the emotional significance of severe trauma, we have to consider the following problems:

- (1) The influence of the trauma on the individual's concept of his body image.
- (2) The effect on his social relations.
- (3) The economic impact.

What thoughts come to the injured after he has recovered from the first physical onslaught, after he has received emergency treatment and now has time to consider his situation? The emotional shock of these experiences manifests itself in various aspects, of fear, anxiety, doubt about the future, correct knowledge or exaggerated concept of the duration of his incapacity, and realization of the permanency of his affliction. Hope may give way to helplessness, or, conversely, unjustified hope of return of function may be expressed. This pathetic optimism is noted, for example, in paraplegics.<sup>1</sup> Fear of recurrence of illness (as in coronary disease) may cause over-cautiousness. Superstitious beliefs may exaggerate the significance of the original physical trauma.

The patient starts to worry about himself. Thoughts come to him as to the problem of disfigurement and the disturbances in the "libidinous structure" of the body image (as Schilder<sup>2</sup> emphasizes), the fear as to possible frustration in his attempts to move around, to ambulate, to be active, to work, to be able to fulfil and enjoy the sexual role. He asks himself, "What will the effect of my injury be in relation to my wife or husband, family, friends, and co-workers?" Fears take possession of the injured—fears that he may lose contact with his sur-

roundings, that he will become alienated from family, friends and children because of the loss of contact during prolonged hospitalization. In brief, the contacts with society, the family group, the friends and co-workers and the community at large are at stake.

And last, but not least, the economic threat: "Will I be able to support my family and myself, will I become a burden to society, will I be capable of continuing in the same pattern of economic life, or will I be reduced in status and in economic prestige as well as in social prestige and personal happiness?"

This is only a brief and condensed enumeration of the problems and fears besieging patients. What reactions may we anticipate, what psychiatric danger signals should we look for, and what can we do to prevent an unfavorable psychological reaction which may at times exceed the seriousness of the severe physical trauma itself?

We expect and allow for a certain amount of anxiety and apprehension; also, for the acute sadness which we call "depression," but which is really an "acute grief reaction." This is a *normal* reaction usually accompanying this first anxiety. If the patient can overcome these early emotional symptoms and can obtain equilibrium of mind and emotions, he can then be led to acceptance of his disability and to constructive thinking for the future. But—if not—what type of untoward reaction may we see?

(1) THE NEUROTIC REACTION. The initial anxiety and apprehension may continue, even increase, become a pattern of behavior and, eventually, a way of life. The patient may become disproportionately depressed. He may be preoccupied with suicidal ideas. He may even attempt suicide. Or the duration of the initial grief reaction may become excessive, paralyzing all attempts at rehabilitation. Either pattern would be an abnormal depressive reaction characterized by the excessive amount, the excessive symptoms, and the excessive duration of the sadness. Obsessive-compulsive reactions are sometimes observed. They manifest themselves by obsessive pre-occupation with disfigurement, loss of function and disability. Or we may see an unconscious exaggera-

\*From the Department of Medicine and Surgery, Veterans Administration, Central Office, Washington 25, D. C.

Presented at the annual meeting of The Medical Society of Virginia, October 18-21, 1953, at Roanoke, as a part of the Symposium on Rehabilitation.

tion of the significance of the trauma which manifests itself in the so-called "hysterical overlay," the conversion symptoms which add pseudo-physical signs to the after-effects of the injury. We may observe disturbance in sensations without organic basis, the glove and stocking anesthesia or the loss of sensation over one-half of the body, usually on the side where the traumatic attack was experienced, sometimes including the special senses: The patient hears less, sees less, smells less, and tastes less on the affected side. Functional motor paralysis may be found, abasia-astasia (inability to walk and stand), hysterical aphonia, amaurosis or seizures of non-organic type may add to the confusion and difficulty in distinguishing *bona fide* organic sequelae of the trauma from the functional overlay. These manifestations must not be confused with conscious attempts to exaggerate the symptoms, nor with malingerers.

To be sure, we do see these reactions more often when compensation, pension or litigation are involved. But we find also in patients who are free from problems of "secondary gain," hysterical reactions, or—as we are now calling them in our new nomenclature—conversion reactions, meaning conversion of emotional conflicts, desires or fears into signs and symptoms.

Thus, there are four "neurotic" reactions. They are anxiety, depression, obsessive-compulsive behavior, and conversion reaction. They are characterized by increase of the normal emotional symptoms reaching proportions which make the individual incapacitated beyond the usual degree and beyond the usual period of time one may anticipate or by a change of his fears and desires into pseudo-organic manifestations which are an addition to the organic picture.

(2) THE PSYCHOTIC REACTIONS. Instead of a neurotic reaction, we may see a psychotic pattern. Here we have an individual who is so stunned by his physical impairment, disfigurement and disability that he retreats from the world of reality into a world of make-believe. To defend himself against the hostile surroundings, he breaks with reality. The form of the psychotic reaction varies—some show a psychotic depression; that is, the patient exhibits severe guilt feelings. He accuses himself of misdeeds which, he says, are responsible for the injury or physical illness. We also see paranoid

reactions where the patient feels that the world as a whole or certain people have done him injustice, are persecuting him and are so causing loss of stature in society. Other patients may withdraw into the mutism and immobility of the catatonic and so shut out the world. Or they over-compensate their feelings of insecurity by over-activity, or agitated behavior with euphoria, expressing feelings of well-being and sensations of power, in brief, showing the well-known behavior of the agitated manic psychosis.

(3) THE AGGRESSIVE REACTION. Sometimes the abnormal reaction is neither neurotic nor psychotic. Instead, we may see a personality reaction, a pattern for which we have a great number of other names, as, for example, psychopathic states and similar expressions. The patient may feel insecure due to his impairment. He may then hit back at the outside world. He shows his aggression by emotional instability with quick change of his mood and temper tantrums, or he freely expresses hostility and aggressiveness, is uncooperative with the physician, his co-workers and disrupts all attempts at rehabilitation. Others may show a non-psychotic paranoid reaction without a break with reality. Such a patient insists that he has received a dirty deal in life, that everything goes wrong, that nobody loves him, and that nobody cares for him. Such attitude represents a very difficult situation in the management of the patient.

(4) ESCAPE REACTIONS. Here we have a patient who takes refuge to an "ostrich policy." He doesn't want to see what happens, he wants to flee from the situation but he doesn't know where to flee. He runs away from the family to the hospital, and runs away from the hospital to the family, or away from both situations. This situation may culminate or even be characterized from the beginning by excessive use of alcohol "to forget."

(5) THE DEPENDENCY REACTION. This patient "does not move." He wants, perhaps, to stay indefinitely in the hospital where he is protected and can continue his dependency on the "father doctor" and the "mother nurse" or the hospital as "parents at large." Or, perhaps, he takes refuge to his family, and stays home, and refuses to meet society and its challenge. A very dangerous dependency reaction is that of drug addiction. The medicine gives relief. The injection symbolizes the help of the doctor. These become the outward expressions of



the protection by the "father" and "mother" figure. The patient wants to continue to receive this expression of love and tenderness. I must explain here that a great number of these emotional conflicts take place on the unconscious level. In this process, we physicians, in our desire to help, sometimes overdo the relieving of pain. Or our timing may be bad. We may fail to set the right "cut-off" date and so unintentionally cause the patient to become addicted to opiates, barbiturates, or other drugs. This is too complicated a subject to be further detailed here.

(6) THE REACTION OF INDIFFERENCE. Here we have a patient who doesn't appear to be depressed. He just doesn't care. He is not actively aggressive, he is not hostile, he doesn't show anxiety, he doesn't retreat into unreality, he doesn't blame others; but he doesn't do anything positive either. He will follow medical orders, in a passive way, but his general attitude will be "I just do not care." Some take refuge to alcohol, although in a rather passive and undemonstrative way. These patients present some of the most difficult problems in management and are, in reality, persons who are depressed to the degree that they show complete lack of drive and of zest for living.

I will not discuss the literature in this field, some of which may be found in the bibliography at the end of the paper.

A few words on what we consider a desirable reaction. We would like the patient to accept his disability, understand his limitations and liabilities, and particularly his possibilities and remaining assets, that he plan for the future, and that he co-operate with the medical staff and the co-workers, the family and the community for his own sake.

How shall we help the patient to reach such desirable attitudes? We try to understand his reactions and mechanisms. We accept some of the undesirable reactions and try to help the patient, and not think that "this is all pure cussedness." We treat not the disease but the individual. We have to push one person and restrain the other, according to his individuality and not according to his disease. For example, a patient has coronary disease. This, from the emotional standpoint, is a severe trauma even if there is no outside force which caused the injury. He may have to be held back. Another may have to be encouraged to enter activities. We try to see with the patient's eye, seeing his possibilities

even in spite of his severe impairment. We have to abandon the attitude that "I would rather be dead than have such illness or such disfigurement." The patient senses our feelings so we have to think in terms of the patient rather than in our terms. Pinner and Miller's<sup>3</sup> book, "When Doctors Are Patients," was a great help to me in understanding many of my patients. We provide an outlet for drives in activities in which the patient can compete or excel. I give examples which may be known to you—the sport activities which are carried on by paraplegics, as wheelchair basketball in this country, or wheelchair polo in England. If this is not possible, we give the patient a chance to compensate his deficiencies and sublimate his aggressive drives by mental endeavors, by activities in occupational therapy, by painting, writing, producing, being creative. Rehabilitation activities should not be forgotten, but will be discussed more in detail by other speakers. We have to allow the patient to regain his prestige in the economic, social, and sexual spheres:—In the *economic* sphere, by showing him ways in which he can use his capabilities; in the *social* sphere, through recreational activities in which he can participate and through sports where possible; and in the *sexual* sphere, allowing him to sublimate by other activities those drives which are unadjusted or impossible to fulfil.

In this way we may prevent or ameliorate some of the disastrous effects of the emotional impact of severe trauma.

#### BIBLIOGRAPHY

1. Nagler, Benedict: Psychiatric Aspects of Cord Injury, *American Journal of Psychiatry*, **107**: No. 1, July, 1950.
2. Schilder, Paul: *The Image and Appearance of the Human Body*, International Universities Press, Inc., New York, New York.
3. Pinner, Max, and Miller, Benjamin F.: *When Doctors Are Patients*, W. W. Norton & Co., Inc., New York, New York.
4. Ruesch, Jurgen: *Chronic Disease and Psychological Invalidism, A Psychosomatic Study*, University of California Press, Berkeley and Los Angeles, California, 1951.
5. Barker, Roger G.: *Adjustment to Physical Handicap and Illness—A Survey of the Social Psychology of Physique and Disability*, Social Science Research Council, 230 Park Avenue, New York 17, New York (Bulletin 55, Revised 1953).

6. Wilson, Jess Wilson: *The Emotional Life of the Ill and Injured—The Psychology and Mental Hygiene of Rehabilitation and Guidance*, Social Sciences Publishers, New York, New York.
  7. Grayson, Morris: *Psychiatric Aspects of Rehabilitation*, Rehabilitation Monograph II, The Institute of Physical Medicine and Rehabilitation, New York University—Bellevue Medical Center (1952).
- 

### Teach Basic Fire Safety Rules.

Keeping the home fires burning and keeping from being burned in home fires are two entirely different things.

To prevent unnecessary injuries and deaths from home fires, parents should teach their children the elementary facts of fire safety, Dr. Carl J. Potthoff, Rochester, Minn., wrote in *Today's Health* magazine, published by the American Medical Association.

"After the Christmas upswing in the incidence of home fires, there usually is a moderate decrease for several weeks, and then a rise again in February and early March. There is no practical way to fireproof a home completely; the term 'fireproof' when applied to dwellings of any sort is a misnomer. Even in homes of the safety-conscious where education within the family, good housekeeping, construction and repairs are aimed to prevent fires, some hazard exists.

"Accordingly, homemakers should work out plans with the children for use if fire strikes. Education should be judiciously factual according to the age of the child, lest children develop a haunting fear of home fires, particularly night fires."

According to Dr. Potthoff, parents should stress:

1. That escape from the burning building, not the saving of property, is the paramount objective.

2. How to notify the fire department and how to use fire extinguishers.

3. That if clothing catches fire, either in a home or otherwise, it usually is advisable to lie down and to roll over slowly, as flame and heat rise to the face. Wrapping a blanket about the body may be worth-while; running tends to fan the flames.

Dr. Potthoff stated that children also should be taught that when escaping from a fire the following rules should be observed:

1. Keep low in a fireswept room as the risk from heat, smoke and carbon monoxide is less.

2. Don't open doors and windows because drafts cause a faster spread of fire.

3. Doors should be opened cautiously while standing behind them, as the next room may contain superheated air, a blast of which may be lethal.

4. The important body parts—face, hands, scalp—can be protected somewhat by a heavy towel or article of clothing, preferably wet, while dashing through flame.

5. Jumping from upper stories often is fatal and often unnecessary as rescue may be at hand.

6. When doors and transoms are closed, open a window slightly and stay near it, breathing the incoming air.

7. Don't re-enter a burning building to try to rescue a toy or pet.

## DISABILITY CONTROL\*

HERBERT W. PARK, M.D.,

Professor of Physical Medicine and Rehabilitation;  
Medical Director, Baruch Center of Physical Medicine;  
Medical Director, School of Physical Therapy,  
Medical College of Virginia,  
Richmond, Virginia

William S. does not appear to be an unusual man. He is thirty-two years old, married, works an eight hour day, can stoop, bend, lift, run and jump. He does have slight limitation of motion in his low back and knees, but today he would meet the physical qualifications for most average types of employment. This was not always true.

On July 26, 1951, Bill fell 25 feet from a telephone pole while pursuing his usual work for an electric power company in the State of Virginia. Due to the fact that the company had prepared the men in his work group in first aid, he was moved properly without bending his back and was taken to the hospital in Martinsville, Virginia. Here it was found that Bill had sustained a compression fracture of the 12th thoracic vertebra and he had analgesia, anesthesia, bladder and bowel incontinence and motor paralysis below that level. Early decompression was done with relief of spinal cord pressure. Gradually sensation, muscle power, bladder and bowel function returned through a somewhat stormy course complicated by genito-urinary tract infection and recurrent evidence of spinal cord compression.

By January, 1952, the acute phase of treatment was completed. The portrait at that time revealed an asthenic, underweight male who had diffuse muscle atrophy due to disuse, marked limitation of motion in the cervical, thoracic and lumbar spine, shoulders, elbows, hips, knees, ankles and toes. There was some persisting numbness in the toes of the left foot and marked weakness in extension of the left great toe. Because of the severe generalized weakness and limitation of motion that had developed as a result of the necessary prolonged bed rest caused by spinal cord compression, repeated operations and infection, he was a stretcher case.

He was transferred from the acute hospital to Woodrow Wilson Rehabilitation Center at Fishersville, Virginia, in January, 1952. There the medical regime was continued and he was started under treat-

ment in physical therapy and occupational therapy to increase range of motion, strengthen muscles, teach self care, train him in walking and prepare him for return to work.

In approximately 45 days of treatment Bill had reached a sufficiently good level of functional ability that he was able to be discharged. He had not regained full strength and full range of motion in that time. However, it was the opinion that he was ready to return to partial employment and continue on a home routine of hydrotherapy, prescribed exercises and gardening to regain his best strength and range of motion.

On May 1, 1952, which was ten months after injury, he returned to full time employment. His residual degree of general disability was now estimated to be 15%.

In order to get Bill back to work in the shortest period of time, many services and disciplines had to be mobilized:

- (1) An adequate first aid team
- (2) Acute surgical, medical and nursing care at the community hospital
- (3) A Social Service Agency
- (4) An interested employer
- (5) The State Industrial Commission
- (6) An Insurance Company
- (7) The Division of Vocational Rehabilitation
- (8) Vocational testing and guidance service
- (9) Physical Medicine and Rehabilitation Service at Woodrow Wilson Rehabilitation Center, and
- (10) Perhaps the most important, a well motivated patient.

From the accident to the time the patient returned to full time employment every member of the "team" was oriented in limiting the degree of disability. Each group that dealt with the patient defined the area of injuries and its scope of service. The first aid team recognized the possibility of a severe back injury. They moved him to a hospital area where diagnosis and specific life saving, definitive treat-

\*Read as a part of the Rehabilitation Symposium at the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953.



ment was undertaken. This group of physicians found after satisfactory control of the acute disorder had been attained, additional services were needed to return this man to full time employment. Through effective planning and treatment this patient was able to return to full employment in less than one year following a severe back injury which could have easily ended his life or left him severely disabled. This is an excellent example of disability control.

A survey of the financial aspects of this industrial accident reveals the following:

Cost of Hospitalization and Physician care -----	\$3,399.60
Compensation paid to family -----	797.16
Cost of service at the Rehabilitation Center -----	233.45
Final settlement (15%) -----	1,276.00
<hr/>	
Total Cost -----	\$5,706.21

By developing a sustaining disability control program the patient, the employer, the Industrial Commission and the insurance carrier saved about \$7,000.00.

In considering the cost of injury, had the patient been discharged from the acute hospital at the time of convalescence, it is difficult to determine an absolute disability as there is no control. It is the judgment of several physicians that he would have been considered to be 90% disabled for future employment. Muscle strength does not return spontaneously and the longer joint motion remains restricted the more guarded is the prognosis for return of movement.

It is estimated that the minimum costs would have been as follows:

Cost of Hospitalization and Physician Care -----	\$4,000.00
Compensation to the family -----	1,040.00
Final settlement (90%) -----	7,656.00
<hr/>	
Total Cost -----	\$12,696.00

This review does not take into account that a new man would have had to be trained to replace him in his work and the untold difficulties that would have arisen to Bill's family had he not been employed for a considerable period of time.

The story of William S. has been repeated many times in the State of Virginia, but they are isolated

cases. The findings of the Liberty Mutual Insurance Company, The American Mutual Liability Insurance Company, the Division of Vocational Rehabilitation and other agencies indicate that effective staging of treatment to the point of work saves money and time for all parties concerned. The Liberty Mutual Insurance Company, pursuant to this concept, opened a Rehabilitation Center in Boston in 1943 and one in Chicago in 1951. Since the opening of the Boston Center they have treated over 2,000 severely injured patients with 84% being significantly improved by treatment and 55% returning to full time work.<sup>1</sup>

Other agencies are concerned with disability control. For the past 19 years a safety program has been fostered in the State of Virginia by the State-Wide Safety Conference. Their efforts have touched all walks of life ranging from home, to school, to industry. The aim of the safety program is disability control through accident prevention. However, in spite of the highly effective safety program, accidents still occur. For example, the Virginia State Industrial Commission reports 13,481 industrial accidents occurred in 1952.<sup>2</sup>

Similarly, the various, local, state and federal public health agencies are concerned with disability control through disease prevention, but many of our hospital beds are filled with patients who managed to elude the various preventive measures.

The safety programs and the public health programs are well established and recognized as playing fundamental roles in our daily life. The care of acute conditions has reached a level never before known. Principally because of steadily improving methods of prevention and treatment of disease and injury, we, as physicians, are largely responsible for producing the problems of geriatrics and the severely disabled. Therefore, it is the physician's responsibility to seek reasonable solutions.

Every physician is invited to consider each patient as a disability control problem. In the predominant number of cases specific definitive treatment is all that is needed. However, when it is evident that the illness or injury will be prolonged or will cause significant residual disability, the physician should establish a sustaining program to lend maximum control in limiting the degree of disability as related to the patient, his family, educability, employability and other related social-economic features. When the prognosis for the individual case warrants, the

team should be organized early so that the motivation of the patient can be sustained through to the point of optimum end results.

It is this observer's opinion that adequate means for care of the large number of cases can be found within his own community. In a relatively small percentage of cases it may be necessary to secure assistance from special centers.

At the present time the Division of Vocational Rehabilitation has evaluation teams located in Arlington, Richmond, Newport News, Norfolk and Roanoke. These groups are made up of physicians and various paramedical personnel in each community. The purpose of these teams is to evaluate the prognosis for employability, and, when the prognosis is favorable, to outline a rehabilitation program to return disabled people to work. Physicians

can secure assistance and recommendations from the team in their area if they so desire, and they can learn what services are available locally and throughout the state to meet the special needs of their patients.

In conclusion, every physician is invited to consider each case as a problem in disability control and when necessary to institute an early, sustaining rehabilitation program to the point of optimum end results. The case reported indicates how a patient with a severe back injury was returned to full time work in less than one year by effective planning.

#### BIBLIOGRAPHY

1. Hanson, S. L.: "The Rehabilitation Process in Workmen's Compensation Injuries". *Industrial Medicine and Surgery*, **21**: 376 (1952).
2. Personal Communication.

#### Radio Series Deals with Superstitions.

To show how certain old wives' tales—like the one about fish being "a brain food"—can sometimes lead us far astray and other times to actual cures for disease, the AMA's Bureau of Health Education has prepared a new radio transcription series entitled, "Supersition . . . or Science." This 13-program series will be available April 1 for broadcasting over local radio stations under the auspices of state and county medical societies.

Here is a brief rundown on some of the subjects covered in this interesting series: (1) Magic Touch—deals with such ancient notions as mad stones;

(2) Nutrition Fallacies—reveals the facts regarding common foods as based on scientific investigations; (3) Quinine—shows how the use of crude cinchona bark by certain Indians led to the development of quinine; (4) Electricity and Magnetism—compares hypnotism employed by quacks and modern medical use of electronics and x-ray; (5) Cancer; (6) Goiter; (7) Anesthesia—traces the development of modern anesthesia from the days when patients were clubbed over the head with a mallet; (8) Wounds—draws comparison between old-fashioned methods of curbing infection and modern treatments; (9) Digitalis; (10) Fertility; (11) Scurvy; (12) Ephedrine, and (13) Tonics and Home Remedies.

## MAINTENANCE AND RESTORATION OF FUNCTION IN SEVERE TRAUMA\*

GEORGE A. DUNCAN, M.D.,  
Norfolk, Va.

Definitive treatment of trauma in its early stages helps our patients. Greater strides can be noted when the problem of rehabilitation is also foremost in the mind of the attending physician from the time of injury. In short, true rehabilitation begins at the bedside or office where the physician first sees the patient. This may require only a brief reassurance to allay his mental fears, or a more detailed analysis of the patient's problem and what the future has in store for him, if he will only help. There is no truer saying than, "The Lord helps them who help themselves." To this extent the patient must be constantly reminded that he alone can move his muscles. He may need assistance in showing him how this can be done and then keep up a steady firm insistence that it must be done. Massage and various mechanical devices do not develop strength in a part unless that part itself is used by the patient.

Exercises to be effective must be strong, intermittent, and interrupted by a brief period of relaxation, so the muscle may recover by receiving nutrition and oxygen and by eliminating waste products. A muscle held in a prolonged state of contraction tends to fatigue and atrophy. He may safely exercise a part if he experiences neither excessive pain or fatigue. Exercises should start within 24 hours after surgery or trauma. Any operation or illness which confines a patient to bed leads to rapid atrophy or loss of muscle tone.

Massage and passive motion at the bedside is usually an initial step toward rehabilitation. Daily passive motion of affected joints is important in preventing contractures as well as placing these parts in their proper posture. This is soon followed by assistive and then resistive exercises.

For many years great strides have been made in starting early rehabilitation of the injured parts. For instance, the fractures of the upper humerus are now seldom treated by the cumbersome shoulder spica. A hanging cast or some form of metal fixation is used so that early mobility can be done. These

exercises are first done in the dependent position and then later in wall climbing or overhead pulley exercises. One of the commonest and most disabling disabilities is the simple Colles' fracture in an elderly lady. Early and sustained exercises must be done with their fingers. They must also be told to move their shoulder and not to keep their arm constantly close to their body or they will develop a causalgia of their shoulder that progresses on to a fibrous ankylosis or frozen shoulder. This disability may be more troublesome than the original injury.

In cases of fractures of the femur and tibia intramedullary nailing is now frequently employed. This allows early ambulation and use of the adjacent joints. This certainly is a great advance over the uncomfortable hip spica. Other forms of internal fixation of fractures are also being used for this same purpose.

In cases of a fractured spine which is being treated by a plaster body cast, we start early exercises for the back. These can be done by the patient chinning himself several times a day.

Following operations on the knee, it is quite important to start early exercises for the quadriceps muscle. It is this muscle when strong that keeps the patient's knee from giving way as he steps forward.

Early ambulation following surgical abdominal procedures keeps up the tone of the patient's musculature. This early ambulation can be done following surgical treatment for a ruptured spleen, or urinary bladder, or intestine. You would probably be a little more cautious about early ambulation in a ruptured liver.

Following burns, as soon as the skin looks healthy and even when skin grafting is done, motions should be started in 10 days to prevent contractures. Also, some surgeons start early motion in repaired tendons of the fingers. This must be done with discretion.

The traumatic or orthopedic surgeon must be the dominant or guiding influence to his patient in his rehabilitation. He is the one person cognizant of the patient's attitudes and the goal he is seeking.

\*Read as a part of the Rehabilitation Symposium at the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953.



The procedures needed to obtain the final result should be dictated by the attending surgeon, as he is fully aware of all the conditions existing in his particular patient.

Rehabilitation if not started early is either a useless procedure, or at best only obtains a poor to fair end-result. Often, it is very advantageous to call in various consultants, such as internists, orthopedists, or psychiatrists.

In various locations these different branches of medicine have organized into rehabilitation teams. Where such teams have been set-up the best talents have been able to obtain excellent early and final rehabilitation. Included in this concept has been the utilization of a Work Shop or Vocational idea. These

means keep the patient stimulated and prevent a mental lapse on his part, and at the same time it has a definite therapeutic value. It can keep a disabled part working. This, then, is a real Maintenance and Restorative Service in returning the patient to normal activities.

I feel sure that you already know all of the mechanical means of rehabilitating your patients, but let me again emphasize the importance of the initial reassurance or psychological approach to the patient regarding his condition when you first see him. State the facts, but, at the same time, don't hang the crepe on him, so that he will not be able to overcome his physical with an added mental handicap.

*343 Wainright Building.*

---

### New Books.

We give below names of some of the new books in the Tompkins-McMcCaw Library of the Medical College of Virginia, Richmond. These are available to our readers under usual library rules.

Abramson—Somatic and psychiatric treatment of asthma. 1951.

American Psychiatric Association—Psychiatry and medical education. 1952.

Andrews—Attitudes toward giving. 1953.

Antibiotics annual, 1953-54. 1953.

Bourgoyne—Surgery of the mouth and jaws. 1949.

Cannon—Bodily changes in pain, hunger, fear and rage. 2nd edition, 1949.

Ciba Foundation—Colloquia on endocrinology: Bioassay of anterior pituitary and adrenocortical hormones. Vol. 5, 1953.

Ciba Foundation—Colloquia on endocrinology: Hormonal factors in carbohydrate metabolism. Vol. 6. 1953.

Ciba Foundation—Colloquia on endocrinology: Synthesis and metabolism of adrenocortical steroids. Vol. 7, 1953.

DePalma—Diseases of the knee. 1954.

Dorfman and Unger—Metabolism of steroid hormones. 1953.

Dubos and Dubos—The white plague. 1st edition, 1952.

Homburger and Fishman—The physiopathology of cancer. 1953.

McCarty—Streptococcal infections. 1954.

Morton—U. S. Army in World War II, War in the Pacific, the fall of the Philippines, 1953.

O'Malley—Michael Servetus. 1953.

Parsons and Ulfelder—An atlas of pelvic operations. 1953. Report to the President by Commission on Health Needs—Building America's Health.

Waldbott—Contact dermatitis. 1953.

Willis—Pathology of tumors. 2nd edition, 1953.

Zimmerman and Anson—Anatomy and surgery of hernia. 1953.

## COMPLICATIONS IN SURGERY, DUE TO ABNORMALITIES IN BLOOD VOLUME, WITH SPECIAL REFERENCE TO THE SYNDROME OF POLYCYTHEMIA\*

HENRY L. BIRGE, M.D., F.A.C.S.,  
Hartford, Connecticut

The tremendous changes that have occurred in medicine and surgery during the past twenty years have given us many new problems.

The application of the new concepts of fluid balance,<sup>1</sup> protein and iron metabolism, are most important to the modern surgeon. With the advent of the Blood Bank, the replacement of 2000 c.c. or 3000 c.c., or even 4000 c.c. of fluid blood, is not rare.

The general surgeon or the specialty surgeon will accept poorer risks, because he can take care of them.<sup>7</sup> He will perform more radical surgery, and often obtain better results than did his father or senior associate. Operations lasting eight or nine hours, under general anesthesia are not uncommon. Patients eighty or ninety years of age are daily seen in our operating rooms.<sup>7</sup>

I am sure you will all agree that the important factors in today's surgical armamentarium are:

1. The facility of using blood and blood replacements.
2. The improved anesthetics and the existence of the American Board of Anesthesiology.
3. The use of antibiotics.

Using these new concepts as a foundation, I am going to ask that you consider the importance of the new conception of polycythemia as a syndrome.<sup>3,4,5</sup>

Polycythemia formerly was considered a rare medical disease. If a surgeon ever noted polycythemia he referred it to a medical colleague for treatment.

The new concept that has been impressed on us, in the operating room by the anesthetists, and in the office in the treatment of ocular thromboses, is that polycythemia is a syndrome, and that the syndrome occurs in approximately 20% of all the surgical patients, and 70% who have hematocrits of 50% and over—Tables 1-2.

Why should we as surgeons be concerned with the syndrome of polycythemia? In the first place, polycythemics are bleeders. If you enjoy doing neat technical surgery, you want to control the hemorrhages by every means possible, and if you can pre-

TABLE 1.

### THE SYNDROME OF POLYCYTHEMIA

1. Polycythemia Vera
2. Relative Polycythemia due to
  - a. Altitude changes
  - b. Dehydration
  - c. Over transfusion
  - d. Cardia disease
    1. Congenital hearts
    2. Decompensated hearts
  - e. Lung disease
    1. Malignancies
    2. Emphysema
  - f. Over-eating and drinking

TABLE 2.

### BARBOUR'S TABLE

#### *Clinical Classification*

- 450 patients with hematocrits of 50 or above  
 346 patients or 75.4 per cent had absolute polycythemia  
 A. Polycythemia vera    B. Secondary polycythemia  
 C. Artificial polycythemia  
 113 patients or 24.6 per cent had hemoconcentration  
 (relative polycythemia)

#### *Incidence of Absolute Polycythemia*

- With hematocrit 50-54 (320 patients)—  
 223 or 70 per cent had absolute polycythemia  
 With hematocrit 55-60 (100 patients)—  
 85 or 85 per cent had absolute polycythemia  
 With hematocrit 60 plus (39 patients)—  
 38 or 97.4 per cent had absolute polycythemia

#### *Absolute Polycythemics with 1,000 cc. or More Excess of Red Cell Volume*

- With hematocrit 50-54 (320) patients—  
 50 patients or 15.6 per cent.  
 With hematocrit 55-59 (100 patients)—  
 34 patients or 34.0 per cent  
 With hematocrit 60 plus (39 patients)—  
 37 patients or 95.0 per cent.

vent undue hemorrhage, you will be able to devote all your attention to the prime reason for which you are operating.

Delayed hemorrhage may spoil all your good work, too, so it behooves the alert surgeons to prevent it, when possible, by recognizing the polycythemic state *before* surgery, and normalizing his patients' blood volume, just as he would if there existed an anemia, with a deficit in blood volume. Polycythemia is as

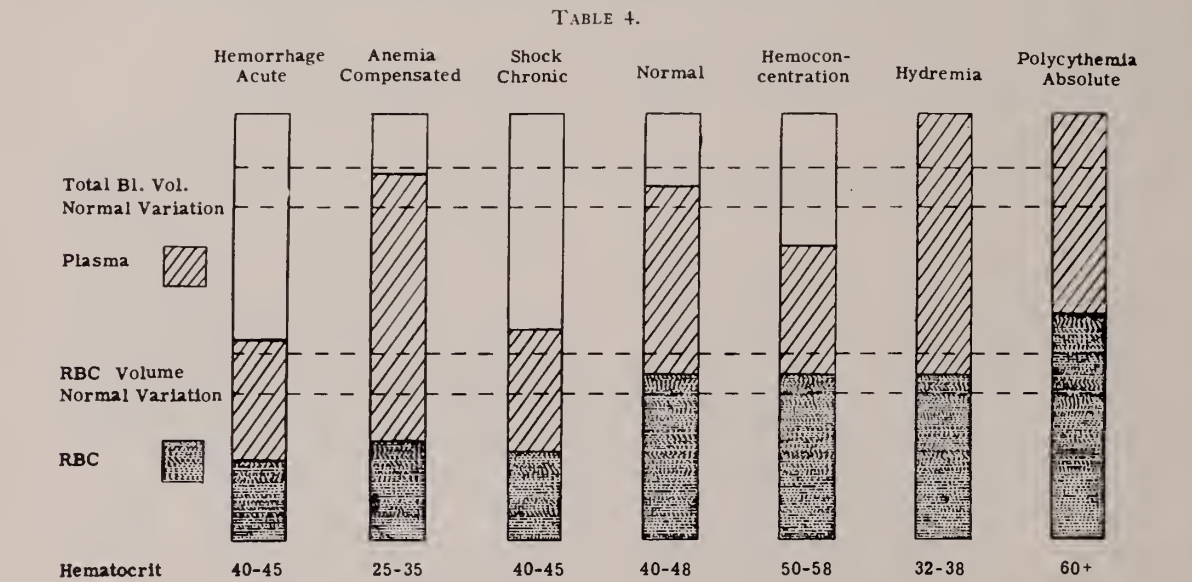
\*Read before the Virginia Academy of Medicine, Section Eye, Ear, Nose and Throat, Richmond, Virginia, December 1, 1953.

important as anemia; it represents the opposite picture—Tables 3-4.

TABLE 3.	
NORMAL 4000-5000 c.c.	
BLOOD VOLUME	
Anemia Deficits	Polycythemia Excesses

The hematocrit can mask anemia as proven by Clark and associates. It also masks a polycythemia, as proven by our investigations. Use the hematocrit because of its simplicity, but do not trust it. Look at the retinal veins for engorgement and cyanosis, but when you want an accurate answer, get a Blood Volume determination.

Various surgical specialties will be more concerned with hemorrhage than the general surgeons. In the field of ophthalmology, for instance, a small hemorrhage in the eye is often a serious complication, while



in general surgery, having the blood bank available, hemorrhage may be less serious as a complication factor.

Thromboses and emboli are one of the grave complications that all surgeons wish to avoid, and we have evidence that polycythemics are subject to thromboses to a much greater extent than are people with normal blood volumes—Tables 5-6.

Thromboses may occur after any operation, but they often occur after operations on patients who have varicose veins.

Note the incidence of surgery to obliterate varicose veins. But how many surgeons inspect their patients

TABLE 5. CAUSE OF DEATH IN THIRTY-TWO PATIENTS WITH PRIMARY POLYCYTHEMIA		
Thrombosis	Number	Percent
Coronary	8	25
Mesenteric	3	9.4
Hepatic	1	3.1
Hemorrhage		
Cerebral	3	9.4
Gastrointestinal	3	9.4
Chronic myelogenous leukemia	4	12.5
Malignant tumors	4	12.5
Peritonitis	2	6.2
Others	4	12.5

(Stroebel, C. F., Hall, B. E., & Pease, G. L.)

This table deals only with true polycythemia. All forms of polycythemia—the syndrome—have similar incidences of thromboses and hemorrhage.

The importance of the syndrome to the surgeon is evident. It must be recognized.

TABLE 6. THROMBOSES-POLYCYTHEMIA VERA (Burris, M. B. & Arrowsmith, V. R.)	
68	adult patients with proven polycythemia vera
23	vascular complications (20 males)
8	thrombo-phlebitis with no antecedent trauma
5	peripheral arterial disease
5	cerebral thromboses
3	myocardial infarction
2	thromboses of the hepatic vein
4	developed thrombosis following treatment with P32.

for excesses in blood volume—even in cases that have varicosities? We have carried many elderly patients with varicose veins and localized leg thrombi



through cataract and other eye operations by normalizing the blood volume before surgery.

Thromboses or emboli are a hazard not only to the surgical patient, but also to the surgeon himself. Here are some figures that illustrate the importance of the hematocrit in excesses and deficits of blood volume—Tables 7-8.

TABLE 7.

Total deaths, all causes, 1949 vital statistics, U.S.A. -----	1,443,607
Total deaths from diseases of cardiovascular-renal system -----	746,434
Total deaths from hypertension -----	96,007
Incidence of true polycythemia in N. J. compulsory sickness insurance 1949-1951 -----	2 in 41,000

TABLE 8.

THE CONNECTICUT MUTUAL LIFE INSURANCE COMPANY	1949	1950	1951	1952
Cerebral hemorrhage, thrombosis	158	228	218	191
Diseases of the circulatory system	951	1017	1025	1192
Coronary disease				
Degenerative and infectious heart disease				
Other diseases of circulatory system				
	1109	1245	1243	1383

In the corresponding years we issued approximately 37,942 policies in 1949; 40,504 in 1950; 39,679 in 1951; and 41,594 in 1952. The percentage relation of deaths to policies issued in 1949 is 2.9%; in 1950, 3%; in 1951, 3%; and in 1952, 3%.

Deaths from this category make up our heaviest mortality class.

Vascular disease is one of the great problems in medicine today. Every physician, in his office as well as in the hospital, has it within his power to markedly reduce the number of deaths and disability from thromboses by merely making the diagnosis of the polycythemic syndrome.

The diagnosis of the polycythemic syndrome can be suspected from the history and appearance of the patient—Table 9.

TABLE 9.

THE POLYCYTHEMIC SYNDROME

History

- 1. Dizziness
- 2. Pains in legs on exercise
- 3. Feeling of fullness in head

Often the florid faced over-weight person is a borderline polycythemic.

Given a real hot spell and inadequate fluid intake, this person will become a dangerous relative polycythemic, subject to all the complications of excessive blood volume.

The same reaction occurs in the Denver area where people who live at high altitudes come down to much lower altitudes for hospitalization. It also occurs in vomiting and with other causes of dehydration. It may occur locally, as with a tourniquet, or dependency.

We must be aware of all forms of the polycythemic syndrome.

The surgeon must avoid general anesthesia on polycythemics because they present a typical difficulty to the anesthetist. Operating table fatalities due to unrecognized polycythemic states are common.<sup>3</sup>

The surgeon who wants smooth pentothal anesthesia must normalize the blood volumes of those patients who are on the excess side. This is especially true in eye surgery where anesthetic difficulties may cause the loss of the eye.

In summary, any form of polycythemia may cause:

- 1. Hemorrhage
- 2. Thrombosis
- 3. Anesthetic deaths
- 4. Difficulty with surgery
- 5. Difficulty with convalescence—Table 10.

TABLE 10.

COMPLICATIONS DUE TO POLYCYTHEMIC SYNDROME OR EXCESSIVE BLOOD VOLUME

- 1. Hemorrhage
- 2. Thrombosis
- 3. Anesthetic deaths
- 4. Difficulty with surgery
- 5. Difficulty with convalescence

The diagnosis of polycythemic states should be suggested to the surgeon by the history and appearance of the patient, but consideration of the hematocrit, the Hbg., and the RBC will also give an indication.

Too many patients are admitted to hospitals one night and operated the next morning, often without consideration of these blood factors. While the hematocrit is valuable, it does not tell all and is often confusing and we must, therefore, use blood volume reports for best results.

Formerly, a hematocrit of 50% was considered normal. In our experience we have come to believe that the complications of polycythemic states are

not to be avoided unless the hematocrit is kept at not over 44% for females and not over 48% for males.

It would be safer to have blood volume determinations on all cases over those levels.

The diagnosis of the polycythemic state or syndrome is simple and accurate, when the blood volume test is used.

We have been using the "Evans Blue" Dye method in our hospital laboratory—Tables 11-12.

ease, and masked by apparently normal hematocrit value.

The new concept that we are proposing to you emphasizes the importance of the excesses of blood volume, and should materially aid in combatting complications from all forms of vascular disease including hypertension, arteriosclerosis, diabetes, as well as thromboses. The polycythemic syndrome is easily diagnosed by blood volume estimation, and quickly and easily normalized by the proper phlebotomy or intravenous fluid administration.

The treatment of the polycythemic syndrome by the surgeon will always be by phlebotomy in the pre-operative and convalescent stage, with draining 250 c.c. to 500 c.c. daily or every other day—depending on the patient's health.

For long term treatment the surgeon may wish to refer his patient to the hematologist for treatment with the radio-active isotopes.<sup>6</sup> Most hematologists are using a phosphorus compound called P32, which loses an atom and breaks down to a stable form of phosphorus. The action of this isotope is, of course, on the bone marrow and controls the formation of excess red blood cells, platelets, etc.

Some individuals with relative states of polycythemia can control their diet and attain a more normal blood volume; others will prefer phlebotomy, if not required too often.

TABLE 11.  
EVANS BLUE DYE  
CALCULATION

1. Total plasma volume—ml. of dye solution injected  
(5.0 ml.)  
 $\frac{\times \text{Dilution of standard (500)} \times \text{optical density of standard}}{\text{Optical density of Dye—tinged plasma (unknown)}}$
2. Total blood volume =  $\frac{\text{Total plasma volume}}{1 - (.96 \times \text{hematocrit})}$
3. Red cell volume = total blood volume — total plasma volume
4. Total plasma protein = conc. of plasma protein  
(gms. %)  
 $\frac{\times \text{plasma volume}}{100}$
5. Total circulating hemoglobin = hemoglobin reading  
(gms. %)  
 $\frac{\times \text{blood volume}}{100}$

TABLE 12.  
METHOD OF REPORTING

NAME\_\_\_\_\_ WARD\_\_\_\_\_ SIGNATURE\_\_\_\_\_

CONCLUSIONS:

	HEMATOCRIT	PLASMA	PROTEIN	WEIGHT
Blood Volume	Total Plasma Protein	GM/k	Women 2.90 + .30 GM/k	Excess GM
			Men 2.95 + .35 GM/k	Deficit
DATE	Plasma Volume	CC/k	Women 40 + 4 CC/k	Excess CC
			Men 42 + 5 CC/k	Deficit
Hist. No.	RBC Volume	CC/k	Women 28 + 3 CC/k	Excess CC
			Men 35 + 4 CC/k	Deficit
	Total Blood Volume	CC/k	Women 68 + 6 CC/k	Excess CC
			Men 76 + 8 CC/k	Deficit

The use of blood volume testing began in 1915, but came to be recognized as of greatest importance in 1947 when Clark and associates developed the theories of "chronic shock", noted especially in individuals with chronic infections or malignant dis-

One last factor in the diagnosis of polycythemic state: the diagnosis should be suggested from the appearance of the retinal veins. Just as the ophthalmic diagnosis and prognosis is of value in hypertensive states based on the spastic status of the retinal

TABLE 13.

A GRADING TABLE  
of  
VASCULAR DISEASE  
as seen  
WITH THE OPHTHALMOSCOPE

NORMAL					Wagener's Estimation Of Narrowing or Arteriol Spasm (Hypertension)				
V — A									
1 — 2/3									
Venous Engorgement Polycythemic States					Venous Spasm				
Normal Veins							Normal Arterioles		
4	3	2	1		1	2	3	4	Grade of Narrowing
									1 2 3 4
Thrombosis									



## PANEL DISCUSSION ON THE TREATMENT OF MALIGNANT LYMPHOMA

BYRD S. LEAVELL, M.D.,  
Charlottesville, Virginia

JAMES R. CASH, M.D.,  
Charlottesville, Virginia

ALLEN BARKER, M.D.,  
Roanoke, Virginia

H. ST. GEORGE TUCKER, JR., M.D.,  
Richmond, Virginia

### Introduction

BY

BYRD S. LEAVELL, M.D.

Various diseases are included under the term "malignant lymphoma" because these diseases involve the same structures in the body, the clinical courses of the diseases are similar, and the outcome is ultimately fatal in each case. As it is used generally, the term "malignant lymphoma" includes the following:

1. Hodgkin's Disease.
2. Giant follicle lymphoma or "Brill-Symmer's Disease".
3. Lymphosarcoma, either reticulum cell or small cell.
4. Leukosarcoma.
5. Lymphocytic leukemia.

Although there are numerous exceptions, the clinical course of the diseases usually covers a period of two to three and one-half years after the onset of symptoms, except in the case of giant follicle lymphoma where the survival time is longer.

Various methods of treatment have been employed in these diseases. These include radiation therapy in the form of radium, x-ray, and radioactive phosphorus, and chemical compounds such as urethane, nitrogen mustard, and triethylene melamine. Cortisone and ACTH are also employed on occasions. It is certain that none of these forms of treatment has produced a cure of these diseases. It is not certain whether treatment has prolonged the average life span in any group, but unquestionably treatment has been life-saving in some individuals. Treatment has made others much more comfortable and has enabled them to lead a more active life. In a few patients undesirable reactions to treatment have been responsible for death of the patient.

There are many questions that arise in handling patients of this type. How can we make a diagnosis? What is the best form of treatment to use initially? Do we treat all patients in the same manner? When do we give subsequent courses of therapy? As a background for considering these and many other questions we have asked several speakers to discuss different aspects of this problem. Dr. Cash, a Pathologist will give his ideas of the nature of these diseases and discuss some of the difficulties encountered in making a diagnosis. Dr. Barker, a Roentgenologist will discuss radiation therapy and Dr. Tucker, an Internist will summarize the place of chemotherapy.

### Remarks on Lymphoma

BY

JAMES R. CASH, M.D.

Since neither the etiology nor intimate nature of Hodgkin's Disease, lymphosarcoma or variant forms of these conditions is known, it is not surprising that it has proved difficult to recognize each of these conditions with accuracy on the basis of the morphology of its lesions.

Epidermoid carcinoma has a characteristic appearance by which the disease can be recognized with a high degree of accuracy. The demonstration of tubercle bacilli in lesions varying from acute necrosis with hemorrhage to calcification allows us to identify the most divergent and dissimilar alterations of tissues as tuberculous. There is no such favorable relationship of the changes observed in the various elements of lymph nodes to those diseases which affect them. Here we observe, without knowledge of the cause, hyperplastic phenomena of lymphocytes, cells of germinal centers, reticulum, reticulum cells, fibroblasts and endothelium occurring in varying degrees at varying rates of speed. Other elements

of the blood often appear for reasons of their own. The picture presented by one of these conditions frequently resembles or overlaps another. It is therefore not surprising that so many mistakes in histological diagnosis are made that many physicians now tend to think of all of these diseases as a large, closely related family whose members cannot be identified as individuals.

To deny a relationship among the diseases loosely classed as lymphomas would indeed be foolish, since our knowledge of their true nature is so slight. My own experience, however, leads me to believe strongly that each of these diseases possesses its own characteristic form, often varying widely in different areas of the body and at different times in its course, which can be recognized by those who are familiar with these variations and will base their final opinion upon a careful correlation of all facts which can be learned about each case rather than upon the histological study of a lymph node alone. When dealing with diagnoses of the lymph nodes it should be realized that nothing can be more misleading than a microscope when left to its own devices.

We have good reason to believe that Hodgkin's Disease and the various forms of lymphosarcoma begin in a lymph-node, group of lymph-nodes, or forms of lymphoid tissue in an organ of the body. In a few cases the disease remains localized long enough to be discovered and removed, though most cases spread in varying degrees at varying rates of speed to adjacent lymphoid structures and organs. In its oldest focus the disease in question has a characteristic form by which it can be recognized in most cases. However, this is the area of disease least often removed for diagnosis. Failure to appreciate the fact that early changes, causing enlargement of glands far removed from the older, well developed lesions, may not yet have assumed their characteristic form leads to many errors in diagnosis.

For example, the early proliferation of lymphocytes in Hodgkin's Disease may so predominate the picture that the true granulomatous character of the lesion is overlooked and an erroneous diagnosis of lymphosarcoma is made. It is therefore essential that a thorough clinical investigation of the extent of disease be made in each case, a gland as near possible to the site of the origin be removed for study and that due consideration be given to all of the clinical facts in interpretation of the histological characteristics of the gland which was removed.

## Radiation Therapy of Lymphoma

BY

ALLEN BARKER, M.D.

For the purpose of this discussion, the following classification which is simple, yet adequate, will be used:

1. Hodgkin's Disease.
2. Lymphosarcoma.
  - (A) Lymphocytic.
  - (B) Reticulum Cell.
  - (C) Giant Follicle.

Because of their similar clinical evolution, their consideration by many as variants of the same disease and the identical therapy required for all, this group of tumors will be discussed together rather than individually. Despite the wide differences of opinion regarding the nature, prognosis and response to therapy of the malignant lymphomas it can be stated without much argument that radiation therapy yields better results in some forms of lymphomas than in others and that the stage in which the disease is found at the time therapy is instituted is a tremendous and the most important factor in the prognosis.

For the purpose of formulating a therapeutic attack and attempting to establish a prognosis in the individual case, I classify the disease in stages as follows:

Stage I. Involvement of only one node or one group of lymph nodes.

Stage II. Involvement of two or more lymph node groups with excellent general condition of the patient.

Stage III. Widely disseminated disease with fever, malaise, anorexia, and generally poor condition of the patient.

The use of radioisotopes in the treatment of malignant lymphomas is mentioned only to discourage as they offer nothing which cannot be accomplished with roentgen therapy and their use is far more hazardous.

Many of the failures of roentgen therapy in the treatment of lymphomas, especially in Stages I and II, can be attributed directly to inadequate dosage. Because of the extreme radio-sensitiveness of most of these tumors, it is unfortunately common practice to give small doses, often not over 100r to the involved glands with no treatment to the adjacent node bearing areas. Nodes treated in such a manner will regress to normal only to recur early along with a spread to distant sites. Thus a golden opportunity

to control the disease for a long period, sometimes for years, vanishes with the first timid attack.

Stage I, of the disease gives the most favorable prognosis, but treatment must be directed not only to the involved nodes but to adjacent node bearing areas and dosage must be heavy, 2500-3500r, to each area. For example, treatment of a localized node or nodes in the neck must be supplemented by an additional port to the supraclavicular nodes on the same side. With nodes in both the cervical and supraclavicular spaces, the mediastinum must be attacked. If the disease is localized to femoral or inguinal glands then the adjacent iliac fossa must be thoroughly radiated. The size of the treatment fields must be large enough to include all of the disease bearing area with a considerable margin of normal tissue. Generally one can administer safely 2500 r to a 15x15cm. field and 3500 r to a 10x10cm. field if treatment is given in increments of not more than 300 r daily and the fields treated on alternate days. This dosage will almost invariably sterilize the area and recurrences, often delayed for many years, will be at a distant site. The so-called segmental radiation, that is the treatment of all gland bearing areas throughout the body, in addition to the local diseased area, I do not believe is indicated as it subjects the patient to too much radiation and there is no undisputed proof that such treatment improves the survival rate.

Stage II of the disease is treated in the same manner as is Stage I with the addition of the necessary number of fields to include all the diseased areas and their adjacent nodes.

The treatment of Stage III of the disease requires the closest collaboration of the radio-therapist and clinician. Critical judgment must be exercised in the choice between chemotherapy and radiation. Many of these patients do not respond to any form of therapy. Others exhibit poor tolerance to radiation of multiple fields such as is required in the widespread disease, but not respond in some instances to chemotherapy or a judicious combination of the two. A careful appraisal of the initial response to the form of treatment used is necessary to determine the future course of treatment. Even then it is often necessary to revise completely one's original ideas in the individual patient. Total body radiation would at first seem to be the logical approach to the widely disseminated disease but the human, like

animals, does not tolerate such radiation well and the small safe daily doses which should not exceed 15 to 25 r and this for only a short period, are insufficient to destroy even the most radiosensitive tumors. If one adheres to the theory of palliation in lymphomatous diseases, then it should be confined to this group in which many of the rapidly progressive, fulminating cases do not respond to any form of therapy.

While the prognosis in malignant lymphomas is generally poor, aggressive therapy in Stages I and II of the disease does greatly increase the five-year survival rate and there have been many reports of survival as long as 15 and 20 years.

Peters<sup>1</sup> recently reported a series of 113 patients with Hodgkin's Disease with a five-year survival rate of 88% in the Stage I and 72% in Stage II, while in Stage III, there was only 9% five-year survivals. Such an enviable record has not been previously reported and while it has been criticized it does emphasize that early diagnosis and aggressive treatment make this disease much less hopeless than is generally recognized.

Radiation therapy of the leukemias is a palliative measure only to be judged almost entirely by the patient's symptoms and, therefore, a discussion of their treatment was omitted from the group of lymphomas described above.

The acute leukemias, especially in children, are often catastrophic in their progress and radiation is generally contraindicated. If used at all it must be employed with extreme caution.

There is a wide difference of opinion as to whether roentgen therapy prolongs the life of leukemic victims but it does have much to offer in making these people more comfortable. The large masses of lymph nodes frequently seen in chronic lymphatic leukemia can be reduced with remarkable speed with external radiation but the doses must be small, usually not over 100 r, and subsequent therapy treatment dictated by the patient's general condition and the response of his red cell and leukocyte count. Further treatments are guided by the degree of enlargement of the spleen, lymph nodes, blood count and the patient's general condition.

Because of the systemic manifestations and hyperplasia of the bone marrow in patients with chronic

1. Peters, M. Vera. Study of Survivals in Hodgkin's Disease Treated Radiologically. *Am. J. Roentgenol. & Rad. Therapy*, **63**: 299-311, 1950.



myelogenous leukemia total body radiation would seem to be the logical approach to this disease but this method is hazardous and is no more effective than local radiation of the spleen. The tremendous enlargement of the spleen and the high white count, so common in these patients, are often reduced to comfortable levels with one treatment of not more than 100 r to the spleen. As in lymphatic leukemia, subsequent treatments are guided by the general response of the patient and by the decrease in white count and the size of the spleen. The effect of each treatment should be checked by white counts before further radiation and the white cell level not forced too low. Radioactive phosphorus has been used in the treatment of chronic myelogenous leukemia with good temporary results but it is much more hazardous than x-ray and should not be used as a substitute for properly employed roentgen therapy.

In general it can be said there are no definite criteria for the treatment of leukemia. Each case must be treated individually and as long as he is in good general condition, comfortable, and without extremely high white count, he should be left alone.

### Chemotherapy of Lymphoma

BY

H. ST. GEORGE TUCKER, JR., M.D.,

While irradiation continues to be the mainstay of our treatment of the malignant lymphomata, certain chemotherapeutic agents have a well established place in the management of these diseases. In this presentation we shall discuss the two cytotoxic agents, nitrogen mustard ( $\text{HN}_2$ ) and triethylene melamine (TEM) and the two hormonal preparations, ACTH and cortisone.

At the onset it may be said that none of these agents has effected a cure in any of these diseases. Nevertheless, their use may bring about very marked symptomatic improvement and in some cases may prolong life.

Nitrogen mustard, given intravenously, and TEM, the oral preparation, are quite similar in many respects. Both release in the body powerful chemical substances which exert a destructive effect on lymphomatous tissue wherever it is present. Both likewise produce serious bone marrow depression which strictly limits the dose of either that can be given. Neither is suitable for the treatment of early lymphomatous disease confined to a few nodes where local

irradiation is preferable. Both have their chief usefulness in the advanced case with widespread involvement of lymph nodes or where severe systemic symptoms such as fever, malaise, anorexia, and weight loss are present. In such cases the administration of either nitrogen mustard or TEM may produce a very gratifying remission with subsidence of all symptoms and resolution of lymph nodes throughout the body. Both are most effective in Hodgkin's disease and somewhat less so in lymphosarcoma and reticulum cell sarcoma. TEM may be somewhat more effective in lymphosarcoma than is nitrogen mustard. The clinical response is more rapid following nitrogen mustard, improvement being evident within a day or two, whereas a week or more may be required for similar benefit from TEM.

The duration of remissions produced by these two agents is also similar. Remissions may last only a few weeks or several months, depending on the rapidity of progression of the underlying disease process. Attempts have been made to prolong the state of remission with maintenance doses of TEM, but such programs carry considerable risk of dangerous cumulative damage to blood forming tissues and are probably unwise. With both nitrogen mustard and TEM we prefer to repeat the course of treatment only when symptoms return. Each relapse may be retreated as long as blood studies show an adequately functioning bone marrow. Unfortunately as the disease progresses, successive courses of treatment are likely to be less and less effective and the bone marrow often shows cumulative depression so that the number of courses given is usually limited.

Nitrogen mustard is given only by the intravenous route, the freshly dissolved dose being injected into the tubing of a running saline infusion. Dosage schedules have been clearly defined by wide clinical experience. The total dosage for one course should not exceed 0.4 mg. per kilogram of body weight whether given in divided daily doses or as a single injection. Following even the smaller doses nausea and vomiting occur regularly in a few hours. The gastro-intestinal reaction can be lessened but not prevented by heavy sedation and atropine. The effects of bone marrow depression appear in about two weeks with leukopenia, neutropenia, and some drop in platelets. These are usually not extreme and blood counts will usually be restored to normal limits in three or four weeks.

TEM is dispensed as a 5 mg. scored tablet. Dosages have varied more than with nitrogen mustard. 2.5 to 5.0 mg. is given daily over two to six days, the usual total dose being 10 mg. to 20 mg. If blood counts are satisfactory two weeks later, an additional 5 mg. or occasionally 10 mg. can be given. The tablet is best taken on arising, on an empty stomach, with food withheld for the next two hours. The taking of sodium bicarbonate 2 mg. with each tablet is said to facilitate absorption. The gastro-intestinal reaction is much less severe than with nitrogen mustard. Some nausea occurs in about half the patients taking TEM, but vomiting is infrequent. Toxic effects on the bone marrow are similar to those with nitrogen mustard, but are less predictable and are apt to be more severe and more prolonged. The greatest depression of leukocytes usually occurs two to three weeks after treatment. Platelet depression is more severe than with nitrogen mustard and may persist for two months or more. The latter constitutes one of the distinct hazards of prolonged TEM therapy.

The greatest advantage of TEM is that it can be given by the oral route and produces less nausea and vomiting. It allows ambulatory patients to be treated in the office or home without hospitalization. The risk of marrow depression is greater than with nitrogen mustard, particularly with repeated courses. For the severely ill patient, nitrogen mustard is generally preferred because of the more prompt relief of symptoms.

ACTH and cortisone are useful mainly in the very advanced stages of these diseases where all other measures have failed. Patients with widespread lymphoma and severe symptoms, who no longer respond to irradiation or to nitrogen mustard or TEM, or in whom these agents are contra-indicated by pancytopenia, may show striking clinical improvement with either ACTH or cortisone. Fever, pain, and other symptoms may be relieved and a feeling of well-being restored. We have seen shrinkage of lymph nodes and spleen and disappearance of ascites. Unfortunately this improvement is only temporary and sooner or later the manifestations of the disease return in spite of continued administration of the drug. It is likely that most of the improvement with ACTH and cortisone represents merely blockage of the harmful effects of the disease on the body. If any inhibition of tumor growth is

accomplished, it is only temporary and soon overcomes. It is possible that this delaying action type of treatment might allow time for regeneration of a depleted marrow and restoration of blood counts. If this occurs, irradiation or other definitive treatment might again be given with more lasting benefit. Otherwise, the effects of ACTH and cortisone must be regarded as largely palliative.

### Summary

BY

BYRD S. LEAVELL, M.D.

Dr. Cash has made clear his point of view that the diseases which are grouped in the term of "Lymphoma" are in reality separate entities. At times accurate diagnosis from a biopsy specimen may be exceedingly difficult or impossible and repeated biopsies are necessary. It is desirable to obtain a biopsy as near as possible to the original site of the disease, before treatment is administered. The clinical facts of the case should be considered along with the histological appearance of the node in reaching a conclusion.

Dr. Barker has classified the diseases according to extent and severity. Recognition of these three stages is a great help in estimating the prognosis and formulating the methods of treatment in the individual patient. Dr. Barker, Dr. Tucker and the other member of the panel appear to be in agreement as to the principles of therapeutic management. Surgical removal of disease of the gastro-intestinal tract and very localized superficial cervical nodes should be tried. Irradiation appears indicated as the initial treatment of patients with a single group of nodes. It is also the treatment of choice in patients with involvement of several groups of nodes if the general condition of the patient is good. The mustards are used in patients with disseminated disease. They are seldom used in relatively localized disease unless there is some reason for not using irradiation. Cortisone and ACTH are used mainly in the very advanced forms of the disease when other measures have failed. The dangers of treatment have been emphasized. All of our discussors agree that after the initial course of therapy the patient should be followed periodically, but further treatment is withheld until there is evidence of recurrence of the disease.

## CLINICOPATHOLOGICAL CONFERENCES

of

## The Medical College of Virginia Hospital

Prepared and Edited by

GORDON HENNIGAR, M.D.\*

WM. R. KAY, M.D.\*\*

CASE #97

A 45 year old, colored, male slaughter-house worker was admitted to St. Philip Hospital on September 6, 1951. His history is best outlined in the following summary of his previous admissions:

*First Admission, April, 1935:* Patient admitted because of a complete fracture of the right mandible from a blow. Following wiring, an abscess developed which was drained.

*Second Admission, April, 1936:* Admitted because of chronic osteomyelitis of the right mandible. At this time the 1st and 2nd right bicuspid teeth were extracted and the mandible curetted.

The patient was followed in the Outpatient Clinic for a few months thereafter and the mandible healed. He was treated for acute gonorrheal urethritis late in 1936 and was then not seen again until November, 1947, when he was examined in the Medical Clinic because of pain and stiffness in his hands, wrist, elbows, shoulders and knees of about seven months' duration. He also gave a history of recurrent swelling in both parotid areas for several years. He was found to have generalized lymphadenopathy, some stiffness in the affected joints, and swelling of the interphalangeal joints. Sedimentation rate 25 mm. per hour. Total proteins 7.5, albumin 3.0, globulin 4.5. X-rays showed rarefaction of the distal ends of the metacarpals and phalanges with some narrowing of the proximal interphalangeal joints. He was then treated symptomatically until

*Third Admission, April, 1949:* He was admitted to the hospital with acute swelling of the right parotid gland and a temperature of 103. The right parotid gland was orange-sized and tender, the left parotid slightly swollen but non-tender. Generalized lymphadenopathy was again noted. Joint symptoms were still present and x-rays now showed definite absorption of the terminal ends of the distal phalanges. Chest x-ray showed generalized cardiac enlargement with a CT ratio of 57%. Total proteins

8.5, albumin 2.5 and globulin 6.0. 1:1,000 OT positive. During this admission a transient pericardial friction rub was noted with EKG changes suggestive of acute pericarditis. Biopsies of several lymph nodes were reported as chronic lymphadenitis. The temperature gradually subsided under streptomycin and penicillin therapy and the parotid swelling and tenderness were markedly reduced. He was discharged improved after thirty-five days.

*Fourth Admission, October, 1950:* Admitted with another acute episode of right parotid swelling with fever. An abscess was suspected but repeated aspirations did not reveal pus. He again responded to antibiotics and local heat. X-rays of the facial bones showed no definite abnormalities, but chest x-rays showed further cardiac enlargement with a CT of 61%.

*Fifth and Final Admission* was in September, 1951, primarily because of cough and shortness of breath which had developed about ten months earlier and had become progressively worse. Cough was productive of a half-cup of foamy white sputum daily. The patient complained of a "filling up" in his left chest and stated that for several months he had had to lie on his left side when reclining. He had lost 10-15 pounds in weight and his appetite had recently become poor. He had continued to have joint pains and frequent, but less severe bouts of parotid swelling bilaterally.

Family history, systems review and past history were otherwise of no significance except that the patient had been treated for syphilis in 1931-32.

Physical Examination: Temperature 100.4. Pulse 90. Respirations 30. Blood pressure 105/80. Patient was well developed, fairly well nourished; moderately dyspneic and coughing frequently, producing large amounts of purulent blood-flecked sputum. There was generalized lymphadenopathy with the largest glands in the axillae measuring 1 x 1½ cms., of a rubbery consistency and non-tender. There was a peripheral type of right facial weakness. The neck veins were distended, more so on the right.

\*Associate Professor of Pathology, Medical College of Virginia.

\*\*Assistant Professor of Clinical Medicine, Medical College of Virginia.



Both parotid glands were enlarged, firm, and non-tender. The teeth were in very poor condition. There was dullness with decreased breath sounds and tactile fremitus at the right lung base posteriorly with many moist rales in both bases. Breath sounds over the left upper chest anteriorly were almost bronchial in character. There was dullness in the right chest anteriorly from the 3rd interspace downward. The heart was moderately enlarged with a rough, high-pitched, Grade III, apical systolic murmur and a diastolic gallop rhythm was noted. There was moderate abdominal distention, but no definite fluid wave. The spleen was not palpable, but the liver was thought to extend 4 fingers below the right costal margin. There was a 1+ pitting pretibial edema. The terminal phalanges of the hand were shortened and bulbous. The thumbs were flexed at the proximal interphalangeal joints and hyperextended at the distal interphalangeal joints. The skin over the ball of the fingers had a "dry peculiar feeling" and pitted on pressure. The remainder of the physical examination was essentially negative.

Laboratory Data: Urine, specific gravity 1.010, albumin 2+, sugar 1+ 3-5 WBC and 1-2 RBC/HPF. Hemoglobin 13 grams, WBC 7,800, 60 polys., 2 eos., 32 lymphs., and 6 monos. Fasting blood sugar 110 mgm.%, NPN 28 mgm.%, creatinine 0.9 mgm.%. STS negative. Total protein 8.3, albumin 1.6 and globulin 6.7. Cholesterol 128 mgm.%, free 64, esters 64. Serum calcium 9.1; alkaline phosphatase 5.8 B.U. Several sputum specimens were negative for acid-fast bacilli. Venous pressure was reported as 250 mm. of water and circulation time with Decholin was reported as 55 seconds. Chest x-ray showed generalized cardiac enlargement with pulmonary congestion and probable pleural effusion on the right. The aorta was also widened. X-rays of the extremities showed essentially the same lesions as before with possibly some progression. An electrocardiogram revealed a PR interval of .24 with a rate of 95 per minute, borderline right axis deviation, with low voltage and abnormal T waves throughout.

Attempts to aspirate pleural fluid were unsuccessful. Following digitalization the venous pressure did not fall, but the circulation time decreased to 20 seconds. Several blood cultures were negative, but one was positive for a hemolytic *Staph. aureus* coagulase positive, and, because of continued low-grade fever, penicillin was started in massive doses.

It was felt by some that the heart murmur varied in intensity from time to time and was loudest in the tricuspid area rather than at the apex. The patient continued to cough and occasionally brought up significant quantities of blood. On September 24th it was noted that the right parotid gland had enlarged since admission and the lymph nodes had also become larger and the patient generally seemed to be worse. Another biopsy was done and again reported as chronic lymphadenitis. A few days later the patient appeared to be improved and chest x-rays showed definite decrease in pulmonary congestion. However, on October 6th the patient was found dead in his bed, having been observed to be in his usual state about 90 minutes earlier. An autopsy was obtained.

CLINICAL DISCUSSION BY  
DR. H. ST. GEORGE TUCKER\*

This rather long and involved history can be summarized as follows:

We have a Negro male in his early forties who was followed during the last four years of his life with a variety of signs and symptoms. I think the clinical picture can be divided into several distinct groups of symptoms. First of all, he complained of pain and stiffness in most of his joints and was noted to have interphalangeal joint swelling when first seen. During his subsequent admissions this was followed to the development of considerable deformity of his fingers with some soft bulbous enlargement of the terminal phalanges and the deformity of the thumbs as is described. During this time x-ray of the hand showed some very remarkable changes. Initially, rarefaction of the bones was the chief finding. Later some narrowing of the interphalangeal joint spaces developed and finally, as I think Dr. Galston will show you, this progressed to almost complete absorption of the terminal phalanges of the fingers. Secondly, during the last four years of his life, and for two to three years before, this man had had recurrent swelling of both parotid glands, for the most part painless and not associated with fever, but with several acute exacerbations with considerable increase in the swelling of at least one parotid with pain and with fever. In addition, during his last hospitalization, he was found to have a right facial weakness. Thirdly, on all occasions it was noted that the patient had a

\*Assistant Professor of Medicine, Medical College of Virginia.

generalized lymphadenopathy and finally the very interesting picture of progressive enlargement of the heart first noted by x-ray without any signs or symptoms. Then, at one point, the development of a pericardial friction rub and electrocardiographic changes suggested a pericarditis. As I say, there were no cardiac symptoms during the earlier admissions, but during the last year or so of his life symptoms of congestive failure appeared, both right and left-sided, with electrocardiograms showing various changes including conduction defects and evidence of myocardial damage. Finally sudden death may very well have been due to a cardiac cause.

Now as to the differential diagnosis, again considering this patient in the light of one set of symptoms at a time, let us first consider his joints. When this man was first seen, there were many possibilities. I think rheumatoid arthritis would certainly have to be considered at the time when he presented himself with swelling of the interphalangeal joints of the fingers. The rarefaction of the bones might suggest certain other things such as a neurotrophic disturbance or circulatory disturbance. I think gout even might be considered although the picture certainly wasn't much like that. However, as the disease progressed through these various admissions, the picture is not that of any of these conditions. Certainly, when we follow these x-rays through, the changes on x-ray to my mind are not those of rheumatoid arthritis. The joint spaces perhaps are narrowed but the surface of the joint is fairly well maintained and there is simply progressive rarefaction of the bones, without cystic areas of rarefaction, leading to absorption of a good deal of the bone of the distal phalanges. I think the changes in the hands alone are quite characteristic of sarcoidosis, and I don't think they look like anything else. I'd like Dr. Galston to comment further on this. In keeping with this tentative diagnosis of sarcoidosis is the fact that this patient showed a progressive rise in the serum globulin and, on one occasion, the alkaline phosphatase was found to be high, both of which are in keeping with this diagnosis. Secondly, consider the bilateral, recurrent, parotid swelling. There are certain things that might be given consideration here such as chronic infection of the parotids or chronic obstruction associated with parotid calculi. However, this would be very unusual as a bilateral phenomena and there

were no signs of inflammatory reaction in the glands. Tuberculosis and syphilis can occasionally involve the parotid but extremely rarely. I might say tuberculosis and syphilis frequently give uveitis but seldom involve the parotid and when both the uveal tract and the parotids are involved it is much more in keeping with sarcoidosis as we will mention in a minute. Another common set of disease which involve the parotid in chronic fashion such as this are the various lymphomata and leukemias. Mikulicz's syndrome is a chronic enlargement of both parotids and lacrimal glands. Mikulicz's syndrome is not a disease, it is simply a descriptive term—it may be due to a variety of agents. Probably lymphomata are the commonest cause of this condition but also occasionally sarcoidosis can produce Mikulicz's syndrome. This man did not have Mikulicz's syndrome, at least as far as the protocol tells us. His lacrimal glands were not involved. The possibility of lymphomata involving the parotid would have to be considered. However, his course is a rather benign one for the presence of a lymphoma and, as I say, we must consider all these things, but actually, the picture as far as the parotids are concerned is absolutely typical of uveoparotid fever even without the eye involvement because in uveoparotid fever the eyes may or may not be involved. The development of a facial nerve paralysis is a common occurrence in uveoparotid fever and other cranial nerves also are sometimes involved. Uveoparotid fever is almost always a manifestation of sarcoidosis. The disease, for the most part, is afebrile although episodes of fever, as the name would imply, do occur. On the occasions when this patient had fever, I'm not sure whether this was due to the disease itself or whether it was due to some intercurrent obstruction and infection. Sarcoidosis is usually a fairly benign disease without much febrile reaction but in the particular form in which it involves the parotids and the uveal tract, fever is more common and may come and go and if this patient's fever was of a duration of days or weeks it probably was a part of the syndrome of uveoparotid fever. If, on the other hand, it was simply an abrupt spike which responded to such agents as penicillin, I would think the fever was simply an intercurrent process due to perhaps obstruction of the duct and infection. At this point, however, because of the changes in the hands and the characteristic picture of uveoparotid fever, I would be willing to say without any hesi-



tation that this patient had generalized sarcoidosis.

We then come to the most interesting part of the problem and that is the nature of his heart disease. This patient, as we said, had progressive cardiac enlargement over at least the last two years of his life. This occurred in the absence of any of the usual causes of cardiac enlargement. The patient had no hypertension, at least in the one recorded blood pressure, there was no syphilis, there were no valvular murmurs except during the terminal episode when an apical systolic murmur appeared, which I presume was due to dilatation of the heart and relative mitral insufficiency when the patient was in severe failure. Now among the various possibilities let us consider first something unrelated to the sarcoidosis which I am already assuming that he has. I think that if we saw a patient who had a picture who had a picture such as this without the other disease probably the most likely assumption would be that he had progressive coronary sclerosis with or without episodes of myocardial infarction leading to diffuse myocardial fibrosis and finally the picture of failure. That may well have been the case in this patient. The pericardial friction rub could have represented an instance of myocardial infarction. However, the EKG taken at this time does not mention any findings to suggest infarction and the mention is simply made that pericarditis was suggested. Diffuse myocardial fibrosis due to progressive vascular disease or progressive coronary sclerosis could perfectly well explain this picture, but I think would be somewhat unusual in a Negro of 40 years with no hypertension and with no other evidence of vascular disease. A few other things which can lead to generalized enlargement of the heart should be mentioned. An infectious myocarditis of a nonspecific type can produce generalized cardiac enlargement with subsequent failure. That is usually a more acute process whereas this picture came on very gradually over a matter of several years and at no point in this man's history is there anything to suggest such an acute infectious episode. Rheumatic carditis, of course, is a possibility. There is nothing in the history to suggest an attack of rheumatic fever and there are no valvular murmurs which, of course, need not occur in rheumatic fever, but in the absence of murmurs, rheumatic fever becomes a good deal less likely. Diphtheritic myocarditis could produce such a picture, but again that is more likely to be an acute

process and not such a chronic enlargement. Beri-beri and myxedema can give generalized cardiac enlargement but they seem rather farfetched in a patient who was followed this closely. There was nothing to suggest either one. The possibility of subacute bacterial endocarditis should be mentioned because we are told that a positive blood culture was obtained during the last admission. However, this seems unlikely to me. There are no other phenomena described which would fit in—that is, no petechiae, no evidences of emboli and the murmur described is not particularly characteristic of a valvular lesion. I am inclined to think that this positive blood culture was a contaminant. The possibility cannot be excluded, but even if he had a bacterial endocarditis terminally that would by no means explain the cardiac enlargement which had begun two years ago so that I don't think that is very tenable as an explanation for the entire nature of his heart disease. If we have already assumed that this man has sarcoidosis, could this have any bearing on the cardiac situation? Yes, it could. Probably the most common situation for the heart to be involved in is sarcoidosis as a result of pulmonary sarcoidosis, particularly of the reticular or miliary type. Sarcoidosis can involve the lung either in a patchy distribution or it can involve lymph nodes or in some cases it can give rise to a miliary type of involvement of the lung, a reticular network being seen on the x-rays and occasionally small miliary tubercles. In this latter type, the circulation through the lung may be interfered with to such an extent as to produce progressive strain on the right side of the heart and cor pulmonale, and many cases have been described of cor pulmonale secondary to pulmonary sarcoidosis progressing to heart failure. This would certainly have to be considered in this patient. However, it does seem that if such were the case this man would have had more dyspnea and cyanosis from his pulmonary disease before the development of chronic heart failure. Actually he had no cardiac or respiratory symptoms a year or so before he died at a time when his heart was already considerably enlarged. The enlargement of the heart appears to me to be rather general, not particularly right-sided. I believe there was some right axis deviation mentioned, but because I cannot see evidence either in his symptomatology or on these x-rays of that type of pulmonary sarcoidosis—that is—the diffuse type with miliary or reticular involvement of the lungs, I think it is unlikely that



this patient had cor pulmonale secondary to pulmonary sarcoidosis. The remaining possibility is that his heart itself was involved by the sarcoidosis. This must be something of a rarity. I undertook to look the matter up and was surprised to find that it occurs not too infrequently. Longcope and Fisher in 1942 made a study of sarcoidosis of the heart. They found four cases in the literature autopsied and showing involvement of the myocardium with sarcoid. Longcope and Fisher added five cases of their own with clinical evidence of cardiac enlargement and in some cases heart failure from sarcoidosis. Two of these were autopsied and did show considerable involvement of the myocardium with sarcoidosis. In all of these cases, the outstanding feature was progressive cardiac enlargement. Some were symptom-free, some developed arrhythmias and electrocardiographic disturbances, some developed heart failure and died and at least one of the cases in the literature had a sudden death. Actually, this patient's entire cardiac course seems to me to fit quite well with involvement of the myocardium with sarcoid. Therefore, realizing that this is a rare situation and that some of the other possibilities might be more likely, I would be willing to sum up by saying that I believe that the patient's entire disease is due to generalized sarcoidosis involving the parotids, the lymph nodes, the hands, and probably the lungs or thoracic lymph nodes, although I couldn't see much of that on the x-ray, and widespread sarcoidosis throughout the myocardium causing heart failure and sudden death.

MODERATOR: Dr. Galston, will you demonstrate the x-ray films?

DR. HERBERT GALSTON: There are four chest films for evaluation which were taken over a period of time from 1947 to 1951. The lung fields in all

except the third demonstrate a moderate degree of congestion manifested in both bases. The middle and upper 1/3rd of both lung fields appear essentially clear. There is nothing to suggest the miliary or the reticular pattern of a Boeck's sarcoid. In none of the films is there a significant hilar enlargement. The last chest film demonstrates considerable obscuration on the right, particularly the region of the costo-phrenic sinus, that very well could be due to a moderate degree of pleural effusion. The heart in all four films appears at the upper limits of normal as to its transverse diameter. No specific enlargement can be demonstrated. The contours of the heart demonstrate nothing unusual. Essentially, then, we have a nonspecific cardiac enlargement that has extended from 1947 through 1951. Part of this enlargement could be due to an associated pericardial effusion of moderate degree. The lung fields demonstrate congestion and on the last film there is some evidence of pleural effusion on the right.

The interesting films are those of the hands. The first film, taken in 1947, demonstrates only a questionable osteoporosis. There is none of the stigmata of rheumatoid arthritis except possibly for the nonspecific osteoporosis. It is to be pointed out that the distal tufts are all here and that there is no evidence at this time of any degree of bone atrophy. However, in 1949, (Fig. 1) in both the right and left hands there can be seen a definite loss of the bone substance involving the distal tufts of the phalanges of both hands. There has been a slight further decalcification, generalized. There is, perhaps, slight narrowing of the proximal interphalangeal joints, a location where the evidences of rheumatoid arthritis are most manifested. However, this is questionable and a slight degree of flexion of the fingers can simulate the narrowing of the joint. There is cer-



Figure 1 and 1a

tainly none of the bone loss in the joint surfaces which go along with more advanced rheumatoid arthritis. Essentially, the lesion at this time is the atrophy of the distal tufts without evidence of periosteal proliferation. There is no evidence of bone production. It is a dry bone atrophy. The third film (Fig. 1a) in 1951 reveals further loss of bone substance involving now not only the distal tufts but the phalanges themselves. Again there is no evidence of bone proliferation or periosteal reaction. As to the differential diagnosis of these bone lesions, I would like to say first, that from the x-ray standpoint these changes are not characteristic of the usual case of Boeck's sarcoid. Bone changes occur in 10 to 15% of cases of Boeck's sarcoid and they are usually of two types. The first is a cystic type where a small radio-lucent shadow appears in the shafts of the small bones of the hands and feet and in their sub-articular areas. The second type is a so-called lattice arrangement where there is decalcification with resorption of the small or minor trabeculae which gives the appearance of coarsening of the trabecular pattern. Then, a combination of these two processes occurs which is very rare and in this case bone atrophy may occur. Therefore, we cannot say that bone atrophy rules against a Boeck's sarcoid as in this case today. This type of lesion, however, as we see on these films is more apt to occur in such disturbances as Raynaud's disease or scleroderma or Buerger's disease, diabetic gangrene and so forth. Less common causes of this type of bone change are ergot poisoning, frost-bite and as previously stated very rarely from Boeck's sarcoid. So, from an x-ray standpoint I feel that these x-ray changes are more likely due to a neurotrophic disturbance such as Raynaud's disease or scleroderma.

MODERATOR: I believe that this patient was seen by Dr. Edward Ray. Dr. Ray would you care to make any comment?

DR. RAY: Our clinical impression on this patient was much the same as that outlined by Dr. Tucker. I saw this patient because of the possibility of Boeck's sarcoid, and I felt that several factors weighed heavily against the diagnosis of Boeck's sarcoid. One was the x-ray appearance of the hands which Dr. Galston has just described for us, and I felt that this was very atypical for sarcoid. Another thing was the presence of good sized lymph nodes with no evidence of pathology suggestive of Boeck's sarcoid. We frequently remove lymph nodes from

the supraclavicular area in suspected cases and almost invariably if the disease is sarcoid, the lymph nodes show evidence of it. In my own experience I haven't seen any case of sarcoid which had reasonably enlarged lymph nodes which were not positive for the diagnosis. The third point, which isn't very strong evidence against sarcoid, there was nothing in this patient's x-ray picture of the lungs to indicate hilar lymphadenopathy or the usual picture of pulmonary sarcoidosis.

The clinical course is very much like that of sarcoid, but I thought that these three particulars which I have mentioned ruled against that diagnosis.

DR. KIRKLAND: We have seen two other cases of Boeck's sarcoid with similar x-ray changes in the fingers of the hands. That is what led us to make a diagnosis of Boeck's sarcoid in this patient—the unusual appearance of the distal phalanges which we had noticed in two proven cases of sarcoidosis.

CLINICAL DIAGNOSIS: Boeck's sarcoid.

DR. TUCKER'S DIAGNOSIS: Generalized sarcoidosis involving the parotid glands, lymph nodes, hands, lungs and myocardium.

ANATOMICAL DIAGNOSIS: Generalized scleroderma  
PATHOLOGICAL DESCRIPTION: DR. G. R. HENNIGAR

The body was that of a middle aged, Negro male, measured 66 inches and weighed approximately 160 pounds. The development and nutrition were fair. There was two plus pitting edema of the legs. The entire skin was dry, scaly and shiny. The skin of the flexor surface of the terminal phalanges ("balls of the fingers"), was dry, and showed pitting edema. The terminal phalanges revealed a striking appearance, being markedly shortened and bulbous with flexion of the thumbs at the proximal interphalangeal joints. There was swelling in all of the interphalangeal joints.

Grossly, the skin in generalized scleroderma shows a variety of changes depending upon the stage of development of the disease. The early phase of the disease is manifested by *edema* of the subcutaneous tissue, which as a rule does not "pit on pressure". The skin is tense and cannot be folded. The next stage is one of *induration*. The skin is found to be hardened and stiff. Hyperpigmentation and depigmentation spots may appear. The end stage, called the *atrophic* stage, is characterized by a dry, inelastic shiny type of skin, especially marked over the tips of the fingers, which become smaller and pointed. The fingers become immobilized and as-



sume a flexed position. 89% of cases have sclerodactylia.<sup>1</sup> Dermal ulcers may develop. Ectropion may result from atrophy of the eyelids. Recently, we saw a case of generalized scleroderma in a white, male, 23 years of age with a history of active scleroderma for 15 years. He died of multiple squamous carcinomata of the skin. Rarefaction of the distal ends of the metacarpal and phalangeal bones, seen by X-Ray may be explained on the basis of partial or complete occlusion of dermal vessels resulting from the fibrosing process in the skin.

Histologically, sections of the skin were taken from the chest, abdomen, upper arms and legs. They revealed findings compatible with generalized scleroderma, consisting of atrophy of the epidermis and skin adnexa, especially the sweat glands. Collagenization, fragmentation and "clumping" of the elastic fibers were seen in the corium in all sections of the skin examined (fig. 2). Perivascular infiltration with lymphocytes was conspicuous (fig. 3). Intimal proliferation of arterioles was seen. In other cases of scleroderma, it has not been unusual to find fibrinoid changes in the vessels and a periarterial cellular inflammatory exude, rich in eosinophils. Occasionally, we have seen lesions simulating the vascular changes of periarteritis nodosa and dis-

give rise to hemorrhagic effusion in the corium and subcutaneous tissue. Furthermore, they cause tiny areas of necrosis in the epithelium, giving rise to papules which become infected, break down and leave superficial ulcerations. Such lesions were occasionally seen in the case today.

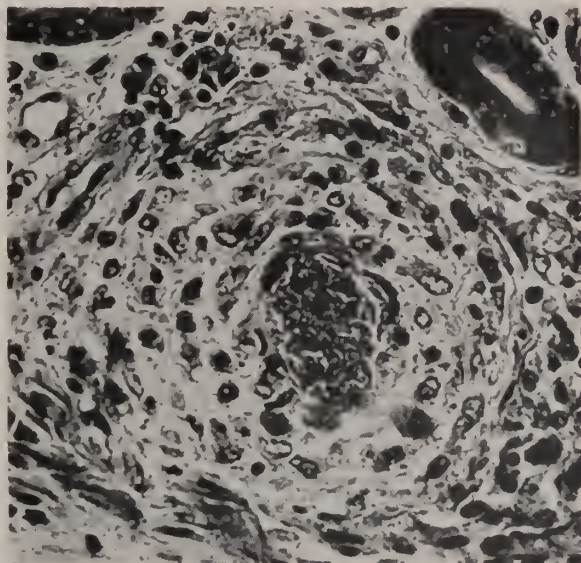


Fig. 3. Skin. A platelet thrombus occupies the lumen of an arteriole in the corium. There is a perivascular accumulation of lymphocytes and swollen fibroblasts. The picture is reminiscent of that seen in periarteritis nodosa. Two sweat glands are seen in the top half of the microphotograph.

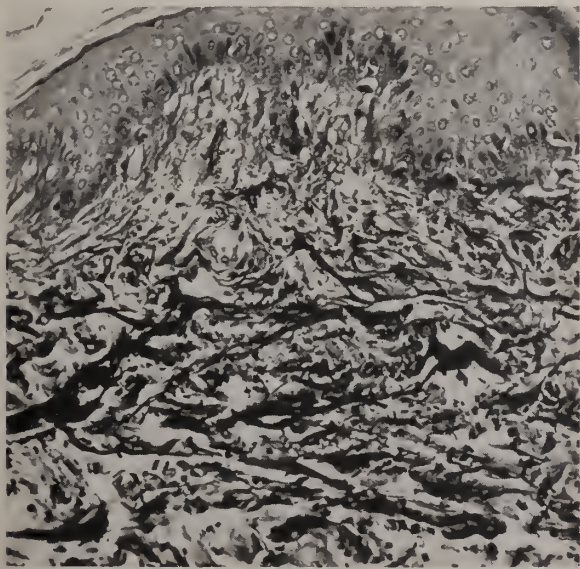


Fig. 2. Skin. The epithelium varies in thickness and there is increased pigmentation of the basal layer. The elastic fibers are clumped to form thick bands and fragmented to lie between the condensed collagen fibers. Note the absence of skin adnexa. Verhoff-van Gieson stain.

seminated lupus erythematosus (fig. 3). Platelet thrombi were sometimes demonstrated in the affected vessels in the case presented today (fig. 3). These

Microscopically, sections of muscles from the intercostal, rectus, psoas, deltoid, and neck muscle groups were studied. The picture composed areas demonstrating loss of striation, atrophy of myofibrils, sarcolemmal proliferation and infiltration with lymphocytes, plasma cells and the rare granulocyte (fig. 4). The distribution was not selectively paravascular as is so often the case in periarteritis nodosa, and disseminated lupus erythematosus. The findings in the muscle were identical to cases of isolated, so-called dermatomyositis.

Generalized lymphadenopathy was a persistent clinical finding and histologically, the lymph nodes showed hyperplasia, engorgement of sinusoids with plasma cells and edema. Large germinal follicles together with pigment-laden macrophages were seen in a number of nodes. These nodes were considered to constitute the entity of dermatopathic lymphadenitis. The constant finding of abundant plasma cells and their accompanying Russell bodies are of interest in view of the probable role of plasma cells in the manufacture of globulins. In the present case a serum globulin of 6.0 was recorded.



The spleen weighed 300 grams. Histologically, there was congestion of the red pulp, atrophy of the lymphocytic tissue and minimal, but distinct periarterial fibrosis or sclerosis. This latter finding is seen in some cases of periarteritis nodosa and in bronchial asthma,<sup>2</sup> but most typically in disseminated

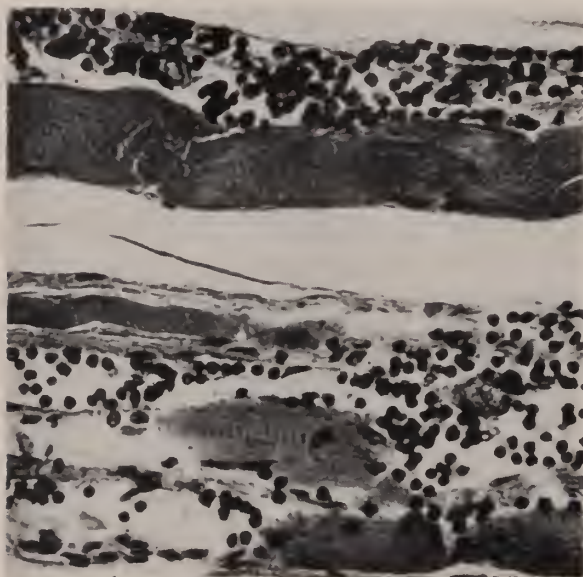


Fig. 4. Section of rectus muscle. Lymphocytes and plasma cells lie between the muscle bundles. In the lower half of the picture the fibers are seen to be vacuolated with round cells occupying the vacuoles.

lupus erythematosus. No areas of necrosis or eosinophilia were seen. There was no morphological or clinical evidence of hypersplenism. The spleen was not large enough to be palpated.

The adrenals weighed 5 grams each. They showed gross and microscopic changes of secondary adrenal atrophy with marked loss of lipoid in the cells of the zona fasciculata.

The liver weighed 1700 grams. Grossly and histologically this proved to be the "seat" of chronic venous congestion, the so-called "nutmeg" liver. The kidneys showed no special pathological changes except for "wire-loops" in the glomerular tufts, a finding most frequently seen in exaggerated form in disseminated lupus. The lungs did not show fibrotic alveolar septae so frequently noted in this disease. A number of sections of the esophagus also failed to reveal any changes. Fibrosis of the wall with narrowing of the lumen of the esophagus is seen in approximately 7-10% of cases of generalized scleroderma.

The heart weighed 675 grams. The gross changes were confined to the ventricles. These were dilated

and hypertrophied. The wall of the left ventricle measured 1.8 cms. in diameter and the right .8 cms. The cause of the myocardial hypertrophy on the left was secondary to scarring. The cause of the right ventricular hypertrophy was secondary to pulmonary arteriosclerosis (end-arteritis obliterans), resulting from the sclerodermatous process. Histologically, the arterioles of the myocardium revealed thickening and fibrinoid degeneration. Fibrosis, often para-arterial was seen in the left ventricular myocardium. Foci of acute and chronic inflammatory cells were seen here and there. The epicardium revealed many round cells and new blood vessels. This was accompanied by fibrinoid necrosis. The coronary arteries were patent. Considerable myocardial damage and fibrosis have been described by Weiss.<sup>3</sup> The remainder of the pathological findings require no detailed comment and are listed under the anatomical diagnosis. The pain, tenderness and swelling of the joints in this case today were thought to be due to fibrinoid necrosis and edema of the collagen and cement substance of the soft tissue in and around the joints. Also the myositis undoubtedly contributed to the pain while the atrophic skin changes were in part responsible for the stiffness. Unfortunately, the parotids were not examined. It is probable the pain and swelling in these glands could also be due to the same underlying generalized process that took place in this patient. Sometimes calcinosis occurs in the soft tissues of patients afflicted with generalized scleroderma. This process causes pain and ulceration of the skin.

No such foci of calcium were discovered in the present case. The cardiac enlargement was due to myoarditis and pericarditis with effusion. The pericardial friction rub was due to the pericarditis. The pericarditis was histologically indistinguishable from that seen in acute rheumatic fever and disseminated lupus erythematosus. The cough with foamy white sputum, dyspnea, distention of neck veins and leg edema could be explained by cardiac failure. The increased P-R interval was due to an acute, edematous inflammatory focus in the interventricular septum. The purulent, blood-flecked sputum was due to bronchopneumonia and pulmonary infarction. The teeth were in poor condition as stated in the protocol. Although the mechanism may not have been active in this case, it is a known fact that in generalized scleroderma there is an increase in the width of the periodontal space which is occupied

by thickened periodontal membrane. The probable cause of death was myocarditis and bronchopneumonia.

#### ANATOMICAL DIAGNOSIS

Generalized scleroderma and myositis. Sclerodactylia with deformities of interphalangeal joints and osteoporosis of phalanges. Chronic pericarditis with adhesions and fibronoid necrosis. Acute and chronic myocarditis. Chronic pulmonale. Dilatation of proximal aorta. Pulmonary edema, congestion, aspiration pneumonia lower lobes. Loculated empyema in the interlobar septum between the right upper and middle lobes. Bacterial bronchopneumonia left lower lobe. Bilateral pleural effusion (rt. 150 ccs., lt. 10 ccs.). Bilateral pleuritis with

fibrinoid necrosis. Small pulmonary infarction left lower lobe. Minimal endarteritis obliterans medium-sized pulmonary arteries. Acute and chronic passive venous congestion of liver and spleen. Generalized reticuloendothelial hyperplasia of lymph glands with plasma cell hyperplasia, Russell Bodies and dermatopathic lymphadenitis. So called "wire-loop" changes in the glomerular tufts. Pseudotubular change with atrophy of the adrenal cortex.

#### BIBLIOGRAPHY

1. Beerman, H.: *Am. J. Med. Sc.*, 216, 458, 1948 (Scleroderma—A Review).
2. Observations to be published.
3. Weiss, S., Stead, E. A., Jr., Warren, J. V., and Bailey, O.: *Scleroderma Heart Disease. Arch. Int. Med.* 71: 749-766, 1943.

---

#### New Drug Aids in Combating Shock.

L-arterenol, a relatively new, synthetic drug, has been found to be of value in combating shock, it was reported in *Archives of Surgery*.

Use of the drug in conjunction with whole blood, blood plasma and fluids helps to raise blood pressure and makes it possible for some patients in profound shock to undergo extensive, and at time life-saving, surgical procedures, according to Drs. R. E. Fremont, N. M. Luger, S. N. Surks and A. Kleinman, Brooklyn. They based their conclusions on a study of 22 patients treated with l-arterenol. The group consisted of six cases of shock associated with an acute surgical abdominal condition, 12 cases of shock occurring during or after major operations and associated in three instances with considerable blood loss, and four cases of severe hemorrhagic shock.

The drug brought the patients out of shock when added to fluid replacement therapy which in itself had been ineffective.

Intravenous injections of the drug resulted in an immediate, striking improvement in the majority of cases, the doctors stated. L-arterenol is superior in its potency and controllability to some of the other similar drugs, they added. The only adverse reaction noted was a sloughing of skin.

The doctors stressed, however, that l-arterenol must not be expected to abolish advanced hemorrhagic shock if the course of bleeding cannot be detected and eradicated. It is essential, they stated, that the cause of the shock state be known and definitive therapy undertaken as quickly as feasible; lost blood must be replaced and continued bleeding stopped.

NOTES  
ON  
PULMONARY TUBERCULOSIS\*

Standard Diagnostic Study (II)  
The Tuberculin Test—(A)

Exclusive of its continued employment as a therapeutic agent by a few physicians (a practice never widely adopted and now almost completely discarded) tuberculin is employed in modern tuberculosis control for three distinct purposes:

1. As a yardstick to measure progress in total tuberculosis eradication within a given area.

2. For group case finding.

(The tuberculin test *also* is used for *mass contact examination* of children, as when a teacher is found to have communicable tuberculosis; this is quite different from *group screening* of children of corresponding age who have not knowingly been exposed.)

3. For differential diagnostic study.

*As a yardstick*

Tuberculin testing of grade school children at 5 to 10 year intervals has been performed in some localities. If incidence of positive reactors is 40% the first time around, 30% after 5 or 10 years and 15% the next time, an index is provided by which success of control measures, or at least rapidity of decline of tuberculosis, in a community, can be evaluated.

*For group case-finding*

Tuberculin testing for group screening of pre-adolescents, never extensively employed in Virginia, has been almost entirely superceded by chest x-ray survey of persons 15 years of age and above.

Except for infants, "unhealed" primary tuberculous infection, to say nothing of clinical tuberculosis, is extremely rare in children under 15 years of age, *by comparison* with older age groups. Since, in addition, almost all tuberculous infection or disease among children is known to be derived from adults rather than from other children, it is felt that maximum protection can be afforded the latter group by screening *all* their elders, with particular attention to those in the later decades of life in whom prevalence is known to be especially high.

*When incidence of tuberculosis in Virginia falls*

\*Prepared by the Virginia State Health Department.

generally, or in high schools, to a level where currently employed x-ray screening becomes relatively unproductive in terms of number of suspects found—the method will be discontinued. Thereafter Public Health efforts will probably be concentrated almost exclusively upon examination of close contacts to known active cases, general hospital admissions, etc., *with or without* supplementary screening by tuberculin test of special, by then low incidence, but still highly susceptible groups, as adolescents. *Pediatricians* and other physicians who care for children are urged to tuberculin test routinely those under their supervision, from near birth to adolescence. This is, however, far different from recommending the organizing of teams *at the present time* by health department or other agencies to conduct tuberculin testing projects for purely screening purposes in schools or at the pre-school level.

*For Differential Diagnostic Study*

The following summary of the tuberculin test, in relation to differential diagnostic study, was prepared by the State Health Department, for distribution to laymen through local health agencies: "A tuberculin test consists of introducing into the skin, by needle or by surface contact, a small amount of material derived from killed tubercle bacilli.

A positive reaction need mean, and usually does mean, only that the person tested has at one time or another been infected. Should the person tested *also* have symptoms or abnormal x-ray shadows which suggest possible presence of tuberculosis, confirmation or exclusion of this diagnosis will then depend wholly upon results obtained from application of the remaining elements of diagnostic study. Nor is degree of a skin tuberculin reaction (one plus, two plus, etc.) known to bear any dependable direct relationship to the presence or absence of clinical disease (requiring treatment), the extent of tuberculous involvement, or the true activity status of a latent tuberculous lesion.

It is generally agreed that the presence of clinical tuberculosis, requiring treatment, can, for all prac-



tical purposes, be excluded in most of those who fail to react to the higher concentrations of tuberculin.

That the mere existence of a positive tuberculin test, in and of itself, need be and usually is of comparatively little significance at the time, or later, will be realized from the fact that until a decade or so ago, the tuberculin test was of comparatively little assistance in differential diagnostic study of pulmonary disease; an estimated 90% or better of adults and a very high percentage of children in most localities had already become infected by the tubercle bacillus. However, there now begin to be reported areas, at least county-wide, where virtually no positive tuberculin reactors are to be found. Throughout the Middle West, as a whole, positive tuberculin reactors are reputed to number no more than 10-15%; in the Far West, perhaps 30-40%; on the Eastern Seaboard, a maximum of 50%. Clearly, as incidence of latent tuberculous infection decreases, the value of the tuberculin test in diagnostic study increases by direct proportion, and, in recent years, has reached a point where its routine use, as an integral part of Standard Diagnostic Study to confirm the possibility or exclude the presence of clinical tuberculosis, has been recommended by the Public Health Service and by the National Tuberculosis Association, for all portions of continental United States."

It is hoped that by alerting the public to both the existence and the importance of the tuberculin test that suspects will learn to anticipate its application in the course of routine differential diagnostic study; this should make it easier for the practicing physician to include the test whenever he considers it to be indicated. (The tuberculin test need not necessarily be performed where sputum positive for Tubercle Bacilli confirms an x-ray characteristic of tuberculosis and a history, symptoms and physical examination compatible with the disease.)

On the other hand it is hoped laymen will no longer be unduly alarmed by a report of a positive tuberculin reaction—again sparing the physician unnecessary expenditure of time to reassure patients not previously conditioned to accept the report realistically.

\* \* \* \* \*

The preparations used at present for tuberculin testing are:

By Intracutaneous Injection:

*Old Tuberculin (O.T.)*

Old tuberculin is made from a culture of tubercle bacilli in a five percent glycerine peptone bouillon. After six weeks, this culture is reduced by boiling in a water bath to one-tenth of its volume and filtered. The filtrate is then used in various dilutions of sterile physiological saline.

*Purified Protein Derivative (P.P.D.)*

Purified Protein Derivative is prepared by submitting O.T. to ultra-filtrations. It contains none of the constituents of the culture medium and none of the metabolic products of bacillary growth. It is alleged by some to possess a higher degree of potency than O.T., although there are physicians who have had considerable experience with both and note no significant difference. P.P.D. gives fewer pseudo-reactions. It is made up in sterile tablets of three potencies, designated as first, inter-mediate, and second strengths. These, when diluted according to instructions, yield concentrations, in each 0.1 cc., of 0.00002 mg., 0.0002 mg., and 0.005 mg., respectively. Dilutions lose their strength rapidly, and should be made fresh every day.

By Surface Contact:

*The Vollmer Patch*

This consists of a square of filter paper that has been saturated with Old Tuberculin. The test properly applied is roughly equivalent to an intracutaneous injection of 1:10,000 dilution of O.T. There is only the *one strength* patch test. When negative, higher concentrations of O.T. (by intracutaneous injection) must then be used, the same as though the first examination had been intracutaneous, when the test is employed for differential diagnostic study.

\* \* \* \* \*

O.T., upon request, will be supplied without cost by the Bureau of Biologics, Virginia State Health Department, to practicing physicians and local health directors, for differential diagnostic study.

Unless otherwise specified O.T. will be dispensed in three bottles each containing 40 doses of the following strengths already diluted, ready for use:

1st bottle—Dilution 1:10,000 (.1cc contains .01 mg.)

2nd bottle—Dilution 1:1,000 (.1cc contains .1 mg.)

3rd bottle—Dilution 1:100 (.1cc contains 1.0 mg.) O.T. as distributed is usable for 2 weeks if refrigerated; at room temperature it should be discarded after one week.

Funds currently available do not permit distribu-

tion of P.P.D. without cost to private physicians. From a practical standpoint, where appointments can be made in advance, for groups particularly, O.T. appears to be equally satisfactory and much more economical.

---

## CORRESPONDENCE

### More Cures with Cortisone.

TO THE EDITOR:

In the February issue of the Virginia Medical Monthly, you reported two cases of Bells Palsy cured with cortisone in two and three weeks. So I thought it might be of interest to know of two more cases cured with cortisone, one a sixteen year old girl, cured in three weeks, and a seven year old girl, relieved in one week and entirely well in two weeks.

I also saw two cases of Herpes Zoster cured in one week with cortisone orally and locally.

CHARLES W. HADEN, M.D.

Evington, Virginia

February 18, 1954.

---

## MISCELLANEOUS

### Excerpt from Congress on Medical Education and Licensure

Licensure and medical care problems created by the heavy influx of foreign-trained doctors commanded a great deal of attention at the 50th annual Congress on Medical Education and Licensure February 7-9. The congress was sponsored by the American Medical Association's Council on Medical Education and Hospitals, the Federation of State Medical Boards of the United States and the Advisory Board for Medical Specialties.

"The infiltration of the medical profession of the United States by large numbers of doctors who have not been able to obtain a proper basic professional education is almost certain to lower the general level of practice in this country," Dr. Willard C. Rappleye, New York, dean of Columbia University College of Physicians and Surgeons, told the meeting. "The numbers coming in are so large that they cannot readily be absorbed without that effect."

Dr. Rappleye pointed out that the United States government, in fostering international good will, is

admitting large numbers of displaced persons, including physicians about whose professional ability no questions are asked. More will be admitted by recent legislation which permits the entrance of several hundred thousands of immigrants above previous quotas.

Dr. Stiles D. Ezell, Albany, secretary of the New York Board of Medical Examiners, also called attention to the inadequacy of the medical training of most of the foreign doctors seeking to practice in the United States. He said that except for Great Britain and the Scandinavian countries the last war brought destruction and degeneration to European medical education.

"Even before the elimination of the last of the unapproved medical schools in this country, there had begun a migration of physicians to this country which has now reached a total of more than 20,000," he stated. "The challenge in this fact is that the profession has not been prepared to understand what is involved in such a massive movement, nor has it realized the numerous deficiencies involved in the collective educational background of this group."

He pointed out that large numbers of foreign graduates have completed specialized training without any consideration of the deficiencies in their basic medical training or their eligibility for licensure.

Dr. Edward L. Turner, Chicago, secretary of the Council on Medical Education and Hospitals, recommended the adoption of a uniform plan for screening the professional competence of foreign-trained doctors. "It seems advisable that there should be a careful analysis of state medical practice acts with serious consideration being given to the cooperative development of some commonly acceptable yardstick or screening mechanism to evaluate competence of the foreign graduate."

Dr. Edward J. McCormick, Toledo, president of the A.M.A., told the meeting that it was the responsibility of medical educators to instill a proper sense of moral values into the minds of medical students.

"Whether this is done by adding courses in ethics and moral principles to the curriculum, or through the medium of after-hours discussion groups, is a problem for the deans of medical schools to decide. But, I am convinced that some concerted effort in this direction needs to be made."

The financing of medical education was touched upon by two speakers. William C. Stolk, New York, president of the American Can Company and a trustee of the National Fund for Medical Education, reported that management is becoming alert to the vital significance of the 79 medical schools. Mr. Stolk said that business is accepting increased responsibility in helping to maintain high health standards and it realizes that financially solvent medical schools are a necessity.

A fast-growing interesting in postgraduate education was reported by Dr. Douglas D. Vollan, Chicago, a staff member of the Council on Medical Education and Hospitals. Presenting a preliminary report of a survey of postgraduate education by the council, Dr. Vollan said that responses from about 5,000 physicians out of 17,000 chosen at random indicated that they spent an average of 83.3 eighty-hour days a year in keeping themselves up to date.

Speaking on medical legislation, Dr. John N. McCann, Youngstown, O., retiring president of the Federation of State Medical Boards of the United States, said physicians must be brought to realize that a basic license to practice issued by a responsible state board is the sole guarantee of legal practice, not the examination given by a specialty board.

A panel on professional orientation brought out general agreement that most medical school graduates enter active practice with inadequate preparation and

training in ethics, medical economics, doctor-patient relationships and social problems. Medical schools have the primary responsibility of providing such teaching, the panel members concluded but they should have the help of medical societies and physicians in active practice.

Medical education should be regarded as a continuing process which lasts throughout a physician's professional career, rather than as something which is completed when a doctor receives his M.D. degree and his license to practice, it was stressed throughout a panel discussion of postgraduate medical education. Two problems which received special emphasis were how to reach physicians in small towns remote from medical centers and how to stimulate those who have no desire to leave their practice for postgraduate courses.

Medical societies have a definite responsibility to sponsor and advance postgraduate education in order to improve the caliber of medical service to the public, it was emphasized by one panel member. Another urged that teachers of postgraduate courses should have adequate previous experience to appreciate the needs of active practitioners. A third participant suggested that there is a rich area for experimentation in the field of home-study courses. There was general agreement on the need and value of participative courses which enable postgraduate students to work closely with teachers and patients in the demonstration of clinical problems.

A committee headed by Dr. Bruce Underwood, Louisville, secretary of the Kentucky State Board of Health, suggested that a uniform Medical Practice Act be developed and be submitted next year.



PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.  
*State Health Commissioner of Virginia*

Obesity—A Public Health Problem

Obesity has come to the front as one of the leading public health problems of our time. Overweight is a danger signal, particularly for those over 40. Studies of life insurance figures show that overweight people develop diabetes, heart diseases, high blood pressure, and other life-shortening conditions earlier, and are apt to die younger, than people whose weight is normal. They are poor surgical risks and have less resistance to infection. Stout women are more likely to develop complications in pregnancy.

It has been conservatively estimated that 25,000,-000 Americans are overweight. This means that these individuals face unnecessary health hazards. Any condition which affects the life and health of so many is a public health problem.

Within the last few years, many fads and fallacies have been circulated guaranteeing easy, painless ways to lose weight. Patent medicines, claiming miraculous results, have flooded the markets. For the most part, these "quick cures" for overweight are not only worthless, but may even be harmful to the person who is "taken in" by their false promises.

Aside from the small percentage of persons who are overweight as a result of glandular abnormalities, the vast majority of overweight persons added their excess poundage by just one way—overeating. Their problem of reducing is simple in theory—it involves merely cutting down their intake of high calorie foods.

To encourage overweight persons to reduce, the Alexandria Health Department established a pilot program in weight control about four years ago. The plan developed as a result of the 1950 Multi-Test program, which the health department sponsors annually, and which revealed in that year that 30% of the persons tested were at least 10% overweight.

This program is based on the theory that the way to keep weight at a healthy minimum is to keep eating at a healthy minimum. Round table conferences are held weekly at the health department, at which time the overweight women gather to discuss the problems involved in reducing and offer helpful suggestions to each other. They exchange

ideas on how they may best exercise their will power and discourage the temptation to overeat as an escape from emotional conflicts, for instance. Occasionally a dietitian, a psychiatrist, or a physician will sit at the conference table along with the participants to teach them the basic fundamentals of nutrition or to explain the psychological problems involved.

Before enrolling in the weight control program, each woman secures the approval of her family physician. She is encouraged to keep in touch with her physician and follow his instructions throughout her weight reduction project. The plan has been endorsed by the Alexandria Medical Society.

At the beginning of each weekly session, the participants weigh and mark down their weight on a chart. A record of each woman's weight is kept on a week-to-week basis. Most of the women have set a goal of losing 1½ pounds a week.

So far, the weight control conferences have been directed toward women only because they are more likely to have leisure time in which to attend the sessions than men. Overweight is definitely not limited to women, however, and a few men have attended the classes.

The weight losses of the women who have participated in this program have proved the effectiveness and success of the plan. The Alexandria Health Department has received national recognition for its pioneer efforts to present to the public opportunities for action on weight control as a matter of health protection.

It is anticipated that programs of this type will become increasingly popular among the public health departments of the State.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE  
DISEASE CONTROL

	Feb. 1954	Feb. 1953	Jan.- Feb. 1954	Jan.- Feb. 1953
Brucellosis -----	4	3	4	9
Diphtheria -----	10	9	17	29
Hepatitis -----	505	182	1,014	426
Measles -----	1,914	464	2,886	743
Meningococcal Infections --	14	31	22	60
Poliomyelitis -----	4	0	6	5
Streptococcal Infections ---	506	750	1,113	1,601
(including scarlet fever)				
Tularemia -----	5	3	16	11
Typhoid -----	5	1	7	6
Rabies in Animals -----	48	46	78	96

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals***Preliminary Report on Recent Developments in Electroencephalography at Lynchburg State Colony and Western State Hospital\***

Electroencephalography is a relatively new diagnostic procedure which has been in general use for less than fifteen years. The electroencephalogram is a record of the electrical activity of the brain. The term becomes less formidable when broken down into its component parts—electro for electrical, encephalo for brain, and gram for record—and is popularly known as EEG, or brain wave test. Present methods require complex electrical equipment and specialized training for the technician who takes the records and the electroencephalographer who interprets them. The field is a rapidly developing one. The EEG, as a sensitive indicator of one type of brain function, is helpful in diagnosis and as a guide to treatment in certain neuropsychiatric problems and in addition is an important research tool. It should be emphasized, however, that the EEG can only rarely stand alone and should be interpreted and used as a part of the over-all evaluation of a given patient.

Brief mention of some of the main historical points is of interest. The study of electrophysiology began with the famous experiment of Galvani during the latter part of the eighteenth century. Electroencephalography, a branch of electrophysiology, did not get its start until almost a hundred years later, when Caton in 1875 showed that electrical activity could be recorded from the exposed brain of living animals. Others made various contributions, but Hans Berger, a German psychiatrist who began his work in this field in 1902, was the founder of clinical electroencephalography. Berger carried out careful studies on animals and humans for many years before he published his first reports in 1929. During this time there had been great advances in electrical engineering, so Berger had the advantage of better recording equipment. It is worth noting in passing that from the beginning advances in EEG have gone hand in hand with advances in electrical engineering,

especially in electronics. Berger showed that fairly regular electrical patterns could be recorded from the human brain through the intact skull and scalp and that these rhythms varied under different conditions and in certain disease states. Strangely enough, his work was received with much skepticism by the medical world, and it was not until 1934 when Adrian, a famous English neurophysiologist, confirmed Berger's findings that they were generally accepted.

Early work in this country was done in New England beginning in 1934. Massachusetts General Hospital began the first laboratory for clinical electroencephalography in 1937. One of the first such laboratories in the South was started in 1940 by the Department of Neurology and Psychiatry at the University of Virginia Hospital. During the past fifteen years development in this new specialty has been rapid and it has progressed from a research curiosity to a proven diagnostic method.

Many of the first large studies were carried out in state mental hospitals, and those responsible soon recognized the potentialities of EEG. In 1942 Lynchburg State Colony became the first of Virginia's state mental institutions to provide this procedure. It has since been added in order by Southwestern, Western, and Eastern State Hospitals.

This report is concerned chiefly with recent developments in electroencephalography at Lynchburg State Colony and Western State Hospital. These have been made possible by the cooperative effort of the Commissioner of Mental Hygiene and Hospitals, the Superintendents and staffs of the two institutions, and the Department of Neurology and Psychiatry of the University of Virginia.

During the latter part of 1952 both Lynchburg and Western State were faced with the problem of continuing and developing their EEG services in the absence of trained personnel. Though both institutions had modern instruments and had operated them in the past, the service had been discontinued at each hospital when the only available trained personnel resigned. Also, the physical setup for EEG at each place was recognized as inadequate. The problem at the two institutions was essentially

\*Article prepared by E. V. Jones, Jr., M.D., Director of EEG Laboratory, University of Virginia Hospital, and Consultant to Lynchburg State Colony and Western State Hospital.

the same, and what follows refers to both Lynchburg State Colony and Western State Hospital unless specifically stated otherwise.

Discussions were carried out between the Superintendents and the Director of the EEG Laboratory, Neurology and Psychiatry Department, University of Virginia. A plan was worked out to train technicians at the University of Virginia and for the Director of EEG there to act as consultant in electroencephalography to both institutions. Plans were also considered for changing and expanding the existing physical setups. These preliminary discussions led to conferences with the Commissioner of Mental Hygiene and Hospitals and the Chairman of the Department of Neurology and Psychiatry, University of Virginia, both of whom approved the general plan.

Each institution selected from its current personnel an individual who desired special training as an EEG technician. They were sent to Charlottesville for about two months' intensive work in the EEG laboratory at the University of Virginia Hospital. The candidate from Lynchburg began training in March 1953 and the one from Western State in April 1953. Concurrently with the training of these technicians, more definite plans were made for reestablishing the EEG laboratories in new and better locations. The necessary physical changes and alterations were carried out, and each institution provided adequate quarters for the work. At Lynchburg this was accomplished by remodeling

unused space in the basement of one of the oldest buildings while at Western the EEG laboratory was relocated in the central building of the new unit.

During the summer of 1953 both of these new laboratories began to operate under the supervision of the EEG Consultant from the Department of Neurology and Psychiatry, University of Virginia Hospital. The consultant makes several visits a month to each for the purposes of continuing the training of the technicians, reading records, and consulting about specific patients with members of the medical staff. Each institution is now training an assistant technician so that the work will not depend on a single individual. Both of these new units have been busy since they started operations, and there is every reason to believe that they will continue so. There is still a backlog of old patients needing this special examination, as well as many new admissions.

Both laboratories are still in the developmental stage, but even the relatively brief experience with this cooperative venture has proved its worth. It has been particularly helpful as an adjunct to the study of epileptic patients and those suspected of having focal brain lesions. In the future, routine EEG's on all new admissions can be expected to prove a valuable screening procedure. The opportunities for research are great and tentative plans for certain projects are being considered. It is hoped that facilities for a more active research program can be developed.



# Medical Society of Virginia Cancer Committee

*Chairman, George Cooper, Jr., M. D.*

Medical School Building, University, Va.

Reprints of this and preceding Bulletins may be obtained from this office

April 1, 1954

## Case Reports

**Case I.** A 64 year old man was referred to a Tumor Clinic for a palliative colostomy to relieve distress due to progressively severe obstruction of the sigmoid by an inoperable carcinoma with pelvic metastases. The referring doctor stated that he had first seen the patient eighteen months before, at which time he gave a history of bouts of low abdominal cramps, constipation and bloody diarrhea, weakness, and fever. Symptoms had been present for about a year, were becoming more frequent. Rectal and proctoscopic examinations were negative, but x-ray examination demonstrated "diverticula of the sigmoid, and a deformity probably representing carcinoma." A surgical exploration was performed. Extensive infiltration and fixation of the sigmoid was found and there were numerous enlarged glands in the areas of regional drainage. The surgeon felt that there was no need of a biopsy to establish the obvious diagnosis of carcinoma of the sigmoid. Also he felt that the palpable lymphatic metastases were too extensive to attempt a surgical cure so he simply closed the wound, later advising the patient and his physician that a colostomy should be performed when obstruction became more severe. As obstructive symptoms were now quite severe and the patient's general condition was deteriorating, the physician sent him to the Tumor Clinic to have his colostomy. Again, rectal and proctoscopic examinations were not helpful. The x-ray findings were reported as demonstrating an extensive sigmoid diverticulitis and a deformity, not characteristic of carcinoma, but so severe that the possibility could not be ruled out. At exploration, the sigmoid was found incorporated in a bulky hard mass and numerous enlarged glands were found. On frozen section of several of the glands and of several biopsies from the mass, the pathologist reported he could find no carcinoma, only inflammation. Therefore surgery was confined to resection of the involved length of bowel and an end-to-end anastomosis. Careful pathological study of the surgical specimen revealed no carcinoma, only an unusually severe chronic inflammation, apparently due to diverticulitis. The patient made a good recovery and resumed

activities in which he had not been able to engage for several years.

**Case II.** A 53 year old woman was hospitalized for study because of symptoms suggesting a partial obstruction in the left side of the colon. The outstanding finding of a complete study was the x-ray demonstration of sigmoid diverticulosis and a pronounced deformity of the sigmoid interpreted as representing inflammatory changes secondary to diverticulitis. The patient responded nicely to antibiotics and was discharged after a second x-ray study by means of barium enema had demonstrated a partial disappearance of the sigmoid deformity. During the next six months, recurrent symptoms led to repeated x-ray studies and additional treatment on three occasions. Varying degrees of diverticulitis were reported by the roentgenologist until the last examination when a change in the contour of the deformity was noted, suggesting the development of a carcinoma in the area of diverticulitis. At surgical exploration, a bulky mass was found in the upper sigmoid and also many enlarged glands. Frozen sections were reported by the pathologist as showing carcinoma in both the biopsy from the mass and in one of several glands. Nevertheless, a length of bowel including the mass was resected and an end-to-end anastomosis performed. The patient did nicely for nearly a year, then with the appearance of liver and abdominal masses, a downhill course began which, in spite of palliative radiation therapy, ended in death two years after operation.

**Comment:** 1. Case I is another example of what can happen when biopsies are omitted because of reliance upon inspection, palpation, and clinical judgment. A patient who never had cancer at all was diagnosed as having a hopelessly advanced cancer. He endured eighteen months of mental anguish and physical incapacity when all that time he was suffering, not from incurable cancer, but from a chronic inflammation amenable to surgery.

2. In Case II, the stage of the cancer when exploration was finally resorted to makes it almost certain that the lesion had been present when earlier x-ray studies were done.

The tumor had simply been obscured by the diverticulitis. Too great reliance upon roentgenological interpretation led to a fatal delay in correct treatment. Roentgenological interpretation is no more a substitute for pathological diagnosis than is clinical judgment.

3. Though there is no evidence that diverticulitis predisposes to carcinoma, these conditions are both fairly common in the sigmoid and may co-exist. The two cases demonstrate the confusion that readily arises. The demonstration by x-ray examination of a sigmoid diverticulitis should serve to alert all physicians involved to the possibility of concom-

itant carcinoma. If the diverticulitis is severe enough to alter the bowel contour significantly, surgery is usually indicated, both to find out whether an obscured carcinoma is present and to resect the diverticulum bearing portion of the bowel.

4. In Case 1, even if his clinical diagnosis had been correct, the first surgeon showed questionable judgment in not resecting the sigmoid. When the primary tumor is resectable, it should be removed, even though distant metastases are demonstrable, to relieve obstruction and to remove a source of hemorrhage and infection.

## MEDICO-LEGAL NOTES

## Consent for Autopsy\*

Necropsy may not be performed without proper authorization except under special circumstances. These circumstances briefly concern themselves with those considered necessary by the medical examiner in cases properly falling within his jurisdiction and in Workman's Compensation, as provided for in the Statute.

Any unauthorized interference with a dead body exposes the offender to a suit for damages by the person entitled to its custody.

Whether a person can by his will or by an agreement made before his death authorize an autopsy on his dead body is not settled in Virginia. The best opinion is that he cannot in this jurisdiction. His directions cannot amount to more than a suggested course of action which those having custody of the body may carry out as they see fit.

When the medical examiner has control of a dead body his authority is supreme. He is entitled to the body in the condition in which it was at the moment of death. Generally he is entitled to authorize an autopsy on any body coming into his lawful custody with certain statutory limitations. It is important therefore for the welfare of the pathologist that he undertake to perform no autopsy on the basis of authority from the medical examiner unless he is sure the medical examiner has jurisdiction over the body and power to authorize the autopsy.

Consent to an autopsy is not required by law to be in writing. Oral consent is sufficient. Telegraph and telephone consents are oral consents. Written consent however is the best safeguard against misunderstanding and facilitates proof of consent. The signature of a witness to the signature of the consenting party is not legally necessary.

Since Virginia has no statutory authority dealing with the right to give consent to an autopsy the common law rules prevail. At common law the right to the possession of the remains which carries with it the right to grant permission for autopsy is vested in the surviving spouse, and in the absence of any surviving spouse, to the "next of kin." "Next of kin" is the person or persons of nearest degree of relationship by blood to a person. The rule of

course is subject to exceptions where the conditions of life have separated the deceased from his next of kin.

The next of kin for purposes of post mortem custody and disposal of a body are: (1) Children of the deceased, (2) Parents of the deceased, (3) Brothers and sisters of the deceased, (4) Uncles and aunts, and (5) other kinfolk in the order of consanguinity. The latter may be determined by consulting the statute which deals with the inheritance of property of those dying intestate.

In all of the groups of kin named there may be two or more persons equally entitled to the custody and control of the body. The law is not clear as to how the relative rights of the several members of any one of these groups are to be determined. As a rule the rights of the father are presumed to be superior to those of the mother although this rule has been changed in some jurisdictions but not in Virginia. Normally however most parents will act jointly although care should be exercised where the mother is giving consent that the father acquiesces. In cases of kinfolk, when a choice must be made among several having the same nearness of consanguinity the rule should be adopted that the one to look to is the next of kin who has custody of the body and has assumed the obligation of disposing of it. Preference may be given to the next of kin who lives in the state or community over one of an equal degree of consanguinity whose residence is more remote and whose consent cannot be obtained to permit an autopsy to be performed in time to allow prompt disposal of the body. As between two or more members of the same group having the same nearness of kin, preference should be given to the one who attained his majority over one who has not. Where the next of kin are minors but are living an independent existence they have full rights with respect to their deceased spouse and children. All rights of a spouse or any next of kin may be abandoned of course. For example where the wife is not living with her husband at the time of his decease or she refuses to assume the trust incident to her right, a waiver of the right is implied and the right immediately descends to the next of kin. The right of the spouse must be promptly asserted, or the right to possession of the body for burial will be

\*Contributed by Geoffrey T. Mann, M.D., LL.B., Chief Medical Examiner for the Commonwealth of Virginia.



held to have been waived in favor of the next of kin.

Executors and administrators, as distinguished from the family have no right over the dead body before burial.

Occasionally there is a known controversy among persons having equal rights to the custody and control of a dead body as to whether an autopsy shall or shall not be done. Under such circumstances a physician or the superintendent of a hospital will do well to consider whether the ends to be obtained by the performance of an autopsy are sufficient to justify its performance at the risk of a law suit. Even though the authority relied on for the performance of the autopsy may ultimately be shown

sufficient, a physician or hospital superintendent may have been subjected to the annoyance and expense of a law suit and may be out of pocket for fees or much worse the decision may go against him with its consequent award for damages.

Finally the next of kin who has the right to permit an autopsy also has the right to restrict it. A note of such limitations should be made on the autopsy permit and the pathologist notified personally.

Care should be taken that the form of autopsy consent is legally satisfactory. For those who are in doubt as to their present form, they may obtain a recommended form from the Office of the Chief Medical Examiner.

---

### New Plastic Dressing.

Successful use of a new plastic dressing for burns and surgical wounds has been described in *Archives of Surgery*, published by the American Medical Association. The dressing, a sprayable, transparent, filmforming polyvinyl plastic, is called Aeroplast (trade mark).

Originally designed as an emergency, initial local dressing for mass treatment of thermal burns, Aeroplast also meets the essentials of a good surgical dressing, according to Dr. Daniel S. J. Choy, Dayton, O. Aeroplast dressing can be removed in one piece, and preliminary studies have shown that it causes no systemic or local toxicity or sensitization.

"Use of the Aeroplast as an initial temporary dressing to prevent further wound contamination opens channels of use in front line battalion aid stations, in bomber aircraft or extended missions over hostile territory, in airfield crash ambulances, and in military and civilian rescue operations following atomic attack."

He based his conclusions on a study of 50 patients treated with Aeroplast, 11 of whom had first to third degree burns, eight of whom had skin graft donor sites which were regarded as second degree burn

equivalents, and 31 of whom had other types of surgical lesions such as operative wounds and lacerations of the hands, neck, face and scalp. The Aeroplast was sprayed or painted directly onto the lesion.

Among the advantages which make Aeroplast particularly suited for mass therapy of burns, Dr. Choy stated, are: marked saving of time over conventional pressure dressings in application; the feasibility of its use by relatively untrained personnel; applicability to parts of the body poorly adapted to pressure dressings; transparency, allowing frequent inspection of the burned area without removal of the dressing, and flexibility, allowing relatively unrestricted early exercise of burned hands and digits without loss of integrity of the dressings.

Aeroplast's advantages in surgical wound cases are: no retardation of wound healing; ability to maintain the sterility of a clean wound, ease of application and removal, and transparency.

The chief drawback of the Aeroplast proved to be the 30- to 45-second period of sharp stinging felt when the dressing was applied to a raw area. The stinging sensation, however, is no worse than that of the burning caused by standard antiseptics.

## THE MEDICAL SOCIETY OF VIRGINIA

## COUNCIL MINUTES

February 25, 1954

A meeting of Council was held at the Society Headquarters in Richmond on Thursday, February 25. Attending were Dr. Vincent W. Archer, Dr. Carrington Williams, Sr., Dr. James L. Hamner, Dr. Guy W. Horsley, Dr. Wilkins J. Ozlin, Dr. Louis P. Bailey, Dr. Frank A. Farmer, Dr. Harold W. Miller, Dr. Claude A. Nunnally, Dr. James P. King, Dr. James W. Love, Dr. David S. Garner, Dr. Mack I. Shanholtz, and Dr. Walter P. Adams.

Considered first was a proposal for group health and accident coverage on a state-wide basis. The proposal was presented by Mr. Charles O. Finley, Chicago, an insurance broker who explained the possible advantages to members of The Medical Society of Virginia subscribing to the coverage now in effect with the Southern Medical Association.

Heard next was Mr. John Kirk of Loyalty Group Insurance, who spoke in favor of group coverage on the local level. Mr. Kirk expressed the opinion that local agents are in a position to render better and faster service.

A proposal of the Indemnity Insurance Company of North America was then presented by Mr. Doren, who stressed the fact that his company had more local representatives than any other insurance company in the state.

After hearing the various proposals, Council discussed the matter at length, and approved a motion to appoint a committee which would study the group coverage question from every angle and make known its findings and recommendations at the next meeting of Council. The motion also provided for an appropriation not to exceed \$100 to be used in securing the advice of recognized insurance authorities. Dr. Archer then appointed a committee of Dr. Horsley, Chairman, Dr. Farmer, and Dr. Bailey.

The next item on the agenda was the matter of selecting a date and location for the 1955 Annual Meeting. Both the John Marshall and the Jefferson in Richmond were holding October dates for the Society, while the Greenbrier, White Sulphur Springs, could only promise late November or December. The matters of available rooms, exhibit facilities, etc., were discussed and it was moved that a committee of Richmond physicians select the headquarters hotel. Dr. Horsley was appointed chairman. The motion carried.

A proposal to hold the Annual Meeting in connection with a cruise was tabled.

A special appropriation of \$56.00 was requested to cover expenses in connection with the January 5 Conference on Problems of the Medically Indigent. The Conference was sponsored jointly by the Society and the Virginia Council on Health and Medical Care, and the

expenses represented service charges and guest luncheons. It was moved and passed that the appropriation be approved.

A request was made to consider an appropriation to partially defray the expenses of Student A.M.A. delegates to their national conference in Chicago. There are two Student A.M.A. chapters in Virginia, and in both instances, their dues are not sufficient to enable their representatives to attend the very important national meeting. It was pointed out that the trip costs approximately \$150. There was some thought that at least part of the expense should be borne by the students themselves. With this in mind, it was moved that each Student A.M.A. chapter in the state be granted \$100 with the request that the student delegates give the House of Delegates of the Society a short report during the Annual Meeting.

The report of the Committee to Confer with the State Board of Nurse Examiners was then read. The report had to do with the following resolution referred to the Committee during the Annual Meeting:

RESOLVED that properly qualified nurses be permitted to start intravenous infusions on doctors' oral or written orders and that to do so does not constitute the practice of medicine (as has apparently been held by judicial cases in the past twelve months).

The Committee's report approved the resolution, provided the word "registered" precede the word "nurses". It was moved and passed that the report be accepted.

Considered next was the matter of awarding certificates of appreciation to past presidents of the Society. Such awards had originally been planned for the 1954 Annual Meeting, but since the meeting will be a joint affair with the District Society, it was thought best to postpone the awards until 1955.

A resolution of the Arlington County Medical Society (see December 1953, Virginia Medical Monthly, page 687) which would have its members "submit through a Board of Censors for clearance, all written or oral statements concerning medical subjects" was discussed. It was reported that, in the opinion of the A.M.A., the resolution was not sufficiently clarified to create a better working relationship between the press and the medical profession. It was moved and passed that the resolution be tabled and a copy of the A.M.A. report be sent the Arlington County Medical Society.

Consideration was given a request that The Medical Society of Virginia study the advisability of forming its own insurance company for professional liability coverage. The A.M.A. had been asked for advice and reported that as a result of its studies, no encouragement could be offered such an undertaking. A motion was made to table the matter and forward the A.M.A. material to the

interested physicians. The motion carried.

Next on the agenda was the matter of hiring a court reporter for the sessions of the House of Delegates. It was explained that while the office secretarial staff could certainly do an adequate job, a court reporter is faster and better able to record such proceedings. The question was raised as to the necessity of verbatim minutes. Also discussed was the advisability of purchasing a modern recording machine for such purpose. It was moved and passed that the matter be referred to the Executive Committee and that prior to the Annual Meeting, the Committee be requested to consider the question further and approve or disapprove the purchase of a machine. The Committee was authorized power to act.

Council was then advised of the suggestion that discussion periods, following presentation of scientific papers during the Annual Meeting, be recorded and published. It was pointed out that The Medical Society of the District of Columbia had found the cost prohibitive, inasmuch as a special reporter was necessary. A suggestion was made that, if possible, a recording machine be used to record some of the discussions. It was moved and passed that because of the cost, a special reporter not be hired to cover scientific sessions during the Annual Meeting, but if a recording machine is purchased, it should be used.

A change was proposed in the procedure whereby the General Practitioner of the Year in Virginia is nominated for the national honor. Brought out was the fact the G. P. of the Year is chosen during the Annual Meeting which usually precedes the A.M.A. Interim Session by only five or six weeks. This leaves an incredibly short time to gather the information necessary to submit with the nomination. It was further explained that most states carry on an active campaign, and that the time element prevents Virginia from making any determined effort on behalf of its award winner. It was therefore moved that a carry-over policy be adopted whereby the General Practitioner honored at our Annual Meeting (usually in October) would be nominated for national honors the following year (A.M.A. Interim Session held in December).

A report of the Chicago meeting of the American Medical Education Foundation Committee members, prepared by Dr. Marcellus Johnson, Jr., was read. The report recommended that The Medical Society of Virginia, following the lead of several other state societies, vote an increase in membership dues of \$20.00, which would be contributed to the foundation. After considerable discussion, it was decided that contributions should be kept on a voluntary basis, and that a contribution card, with an endorsement by the Society, be sent the membership. A motion was made and passed that no increase in dues be voted.

Mention was made of the fact that the Society has no official seal for decorative purposes. It does, however, have a legal one. The original seal was lost sometime around 1840, and efforts to locate it have proven unsuccessful. It was moved that Dr. Love be appointed chairman of a committee to investigate the cost of having a

new seal designed and report back to Council. The motion carried.

Next on the agenda was the matter of moving a monument to Dr. Ephriam McDowell, recognized as the father of abdominal surgery, which had been erected by The Medical Society of Virginia in 1929 on the Lee Memorial Highway, 8 miles north of Lexington. Changes in the course of the highway have left the monument approximately 200 feet off the road, and the Highway Department has offered to move the monument if the Society would appropriate \$200.00 to meet the estimated expense. It was moved and passed that \$200.00 be appropriated for this purpose.

The following resolution was then introduced:

WHEREAS, The Medical Society of Virginia is, and always has been, vitally interested in maintaining a high standard of medical practice in Virginia, and

WHEREAS, laws have been enacted which give the Board of Medical Examiners full authority in the selection of candidates for examination, and

WHEREAS, there is constant pressure being exerted to have physicians of questionable training examined by said Board and to have the standards of practice necessarily lowered,

BE IT THEREFORE RESOLVED, that the Council and The Medical Society of Virginia assure the State Board of Medical Examiners of its high regard and deep appreciation for their untiring efforts and excellent service to the profession and to the state, and

BE IT FURTHER RESOLVED, that the Council and the Society commend the Board for this service and assure them of their full cooperation, and urge them to be ever vigilant in maintaining the high standards of practice which we now enjoy and thus safeguarding the health of the citizens of the state, and

BE IT RESOLVED, that the officers of the State Board of Medical Examiners, who are members of The Medical Society of Virginia, be invited to attend Council meetings and that all members of the Society who are on the Board be invited to attend sessions of the House of Delegates.

The resolution was adopted with the recommendation that copies be directed to members of the State Board of Medical Examiners.

Next to be considered was the matter of making the Speaker of the House of Delegates (Medical Society of Virginia) an ex-officio member of Council. This would enable him to become familiar with matters likely to be brought up during sessions of the House. It was recommended that a change in the By-Laws to make this possible be proposed at the next meeting of the House. In the meantime the Speaker will be invited to all meetings of Council.

Considerable thought was given the matter of having all committees represented at the dinner meeting of the House of Delegates held each year during the Annual Meeting. It was moved and passed that all committee chairmen be invited to attend the dinner.

There being no further business, the meeting was adjourned.



## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

*President* ..... Mrs. K. W. HOWARD, Portsmouth  
*President-Elect* ..... Mrs. MAYNARD EMLAW, Richmond  
*Recording Secretary* ..... Mrs. LEE S. LIGGAN, Irvington  
*Corresponding Secretary*—  
                               Mrs. LEMUEL E. MAYO, Portsmouth  
*Treasurer* ..... Mrs. WILLIAM C. BARR, Richmond  
*Publication Chairman*— Mrs. WM. S. GRIZZARD, Petersburg

### Auxiliary Meetings

#### PETERSBURG

The February meeting of the Petersburg Medical Auxiliary was held February 23 in the conference room of the Petersburg General Hospital.

Mrs. Milton Ende, program chairman, introduced Mr. George Bolsinsky, the hospital administrator, who spoke on the aims and future of the hospital. It is hoped that Petersburg will become a medical center for southside Virginia.

Plans for a fund raising dinner for the doctors and their wives were discussed. The dinner will be held in May at the summer home of Dr. and Mrs. Herman Farber on Swift Creek.

The semiannual rummage sale is to be held April 22nd and 23rd with Mrs. Palmore Irving in charge.

MARGARET S. WHITTLE  
(Mrs. Jos. P.)

#### ARLINGTON

The regular luncheon meeting of the Arlington County Auxiliary was held at the Washington Golf and Country Club, Tuesday, February 9, 1954.

Mr. Robert Peck, one of the members of the Arlington County Board was the guest speaker. Mr. Peck gave a very informative talk on the duties and problems that confront a Board member. He also discussed the taxes, budget, school system, etc. in connection with the county operation. Following his talk, there was an open discussion with Mr. Peck and our members regarding these subjects.

Plans for the coming Fashion luncheon were discussed, also the joint meeting to be held in April with the Alexandria Auxiliary.

The auxiliary members are assisting the doctors with many of the details regarding the county and national AAPS Essay Contest. Arlington County Medical Society is offering the four county high

schools, a total of \$700.00 for winners, this is in addition to their eligibility in the national contest.

EARLE MITCHELL  
(Mrs. ROBERT H.)

#### PITTSYLVANIA

Our activities in the Pittsylvania Medical Auxiliary for March are fund raising projects; namely, a Food Sale to be held on Friday, March 5, at the Parish House of Mt. Vernon Methodist Church in Danville at 10 o'clock. Each Auxiliary member is contributing food for the sale. We are raising funds for our nurses' scholarship fund. We are trying to establish a scholarship fund for nurses (2) who wish to further their training in some speciality, after which they will give their promise to return to Memorial Hospital in Danville for a year. This Food Sale is the first in a series of ten fund raising projects to be undertaken this year by the Auxiliary.

SALLY W. PRITCHETT  
(Mrs. DRAKE)  
*Publicity Chairman*

#### RICHMOND

Mrs. Kalford W. Howard of Portsmouth, president of the Auxiliary to the Medical Society of Virginia, was guest speaker at the February 19th luncheon meeting of the Auxiliary to the Richmond Academy of Medicine.

Members of the Richmond Auxiliary assisted with the nation-wide heart fund campaign during the month of February by distributing and collecting the heart shaped plastic containers for contributions to the heart fund which were set up in local stores and places of business.

Plans are being made for a benefit Tea and Tour which will be given by the Richmond Auxiliary on Wednesday, May 5, 3-5 P.M., at "Belona Arsenal", the historic and beautifully restored home of Mr. and Mrs. Merle Luck, Sr. Proceeds from the Tea and Tour will be given to Sheltering Arms Hospital.

Mrs. William P. Morrisette is general chairman and will be assisted by the following committee chairmen:

#### TICKETS AND RESER-

VATION ..... Mrs. Levi W. Hulley, Jr.

CO-CHAIRMAN     Mrs. Berkeley H. Martin, Jr.

#### REFRESHMENTS—

SANDWICHES ..... Mrs. George K. Brooks

COOKIES -----Mrs. Gayle Arnold  
 PUNCH -----Mrs. Douglas Rucker  
 ARRANGEMENTS -----Mrs. George G. Ritchie  
 BAKED GOODS -----Mrs. H. Chesley Decker  
 PUBLICITY -----Mrs. James R. Grinels  
 HOSTESSES -----Mrs. Walter E. Bundy  
 TEA TABLE -----Mrs. John S. Archer  
 TRANSPORTATION ----Mrs. George H. Snead

#### WISE

An auxiliary to the Wise County Medical Society has been formed. Following a dinner at the Liberty Cafe in Norton on February 10, 1954, officers were elected. They are: President: Mrs. W. B. Barton, Stonega; President-Elect: Mrs. C. H. Henderson, Norton; Vice-President: Mrs. D. B. Jones, Norton;

Recording Secretary: Mrs. L. K. Ingram, Norton; Corresponding Secretary: Mrs. C. P. E. Burgwyn, Norton; Treasurer: Mrs. R. N. Shelly, Norton.

Meetings are to be held monthly. So far there are 31 paid members. At the second meeting held at the home of Mrs. C. H. Henderson with Mrs. Henderson and Mrs. Burgwyn as hostesses, the president announced the appointment of committees and the constitution and by-laws were adopted. Plans were made for the next meeting to be held at the Colonial Hotel in Wise at which time we hope to have some of the State Officers with us. A social hour followed the business meeting.

MRS. C. P. E. BURGWYN  
*Corresponding Secretary*

#### A.M.A. Puts Positive Program in Pamphlet Form.

The testimony which President-elect Walter B. Martin read on January 28 before the so-called Wolverton committee, which is carrying on a fact-finding study of health problems, has been prepared in pamphlet form and is available from the A.M.A. Public Relations Department. All of Dr. Martin's testimony pointed to "a positive, constructive program of action" on the part of the A.M.A. To have his

statement available in printed form is a valuable addition to current medical literature.

#### Official A.M.A. Membership Count.

As of January 1, total membership in the American Medical Association stood at 146,723. This figure is broken down as follows:

Active members, including active members excused from the payment of membership dues, 133,841; associate members, 4,534; service members, 8,078, and affiliate members, 270.

## EDITORIAL

## Segregation in Medicine\*

I FEEL that the average physician now practicing in Virginia, as well as the public as a whole, are, to a large extent, unaware of the discrimination now utilized against an important percentage of medical patients. Hospitalization plans, insurance benefits, payment of physician fees, and few if any of the benefits that the patient has a right to expect, and in most instances feels that he is paying for, are available to the psychiatric patient. There are probably several factors involved in this obviously unjust and, to a certain extent, dishonest situation.

One of the chief factors may be that of ignorance on the part of the various controlling boards of the actual needs of psychiatric patients undergoing an acute emotional or mental illness. They may think of the psychiatric patient as chronic individuals facing months of hospitalization with a generally unfavorable prognosis at the end. If this picture was generally representative, the executives of the various plans of hospitalization and care would have, at least, a partial excuse for their discriminatory attitude. However, the above somber picture is not true of present day psychiatry. We who are doing psychiatry have no intention of over selling our abilities. No one is more cognizant of our limitations. It is true, however, that more than half of psychiatric patients with acute emotional or mental illnesses can be materially aided by relatively brief periods of hospital care and treatment. This is especially true of the involutional reactions, various depressive states, and many acute or abortive psychiatric conditions. Anxiety reactions if accompanied by definite depression are also responsive. These conditions comprise an important percentage of psychiatric patients. The utilization of electric shock, insulin therapy and allied methods has revolutionized in many instances the duration and success of treating selected cases. The average hospital period for an involutional depression is no longer than that of a gall bladder case or a pneumonia patient, and is much shorter than many accidental injuries. Despite this, the Hospital Associations, Physician Participating Groups, and the great majority of companies refuse to recognize these patients on an equal basis with other types of illnesses and refuse to allow the patient any or very meagre benefits. Payment for the psychiatrist is either disallowed or such a small percentage is remitted as to be of little or no help in meeting the patient's obligation.

Full hospitalization is allowed for all surgical procedures. Most, if not all the usual medical problems, are fully covered. Adequate if not liberal payment is made to the attending physician or surgeon, but the psychiatric patient and his family, of equal economic status and a comparable period of disability, are ignored. Many patients have carried, for years, various types of hospital and medical insurance and felt secure in doing so. They have not fractured a leg, developed appendicitis or pneumonia but when confronted with a mental illness of a type responsive to therapy find, in most instances, their needs either greatly curtailed or completely ignored. The above problem is repeated daily in the practice of every psychiatrist, certainly in this area.

Another factor may be that psychiatrists comprise such a minor proportion of the physician population, and that psychiatric patients are relatively fewer. The associations are dominated or controlled, to a large extent by those in surgery, general medicine, or the larger specialties.

These physicians, through indifference, lack of understanding, self interest, or for various reasons of their own have refused to concede the patient who is ill emotionally



or mentally the advantages he has a right to expect as a member of the community in need of hospital care and therapy. It is almost as if the decision as to illness and need of treatment is to be made by edict and not by the physician to whom the patient looks for help. From the standpoint of suffering disability and economic effects, the acutely depressed individual should certainly not be disallowed the benefits which his next door neighbor with gall bladder disease, a fractured leg, or similar misfortune receives without question. No one can choose the type of illness to acquire; he should not have to gamble that it will be one recognized as non-psychiatric.

Another factor, that I trust is not true but could be unconsciously motivating, is the century old custom of cataloguing emotional or mental illness as being somewhat degrading, a sort of disgraceful thing to have; carrying the suggestion of a stigma. It may be felt that these patients are not entirely on the level but could cure themselves if the effort were made, and that to give them the benefits of ordinary hospital care, as allowed others in different fields, would only pamper them and not be effective. Any physician who has seen an agitated depression, full of guilt and anxiety, who has walked the floor for nights, taken no nourishment for days, and is at the end of his emotional capacity, could not possibly condone this conclusion. Emotional pain is agonizing, no less than physical suffering, and requires prompt and adequate treatment.

Another consideration that is of importance: If insurance companies, hospital associations and allied groups continue to discriminate against the psychiatric patient, this is bound to increase the pressure for Government Health Insurance. The head of a family who finds himself burdened with a large hospital and medical debt because his wife became emotionally ill while his neighbor across the street is relatively free from such a burden because his wife fortunately had an organic illness, is going to seek some relief from this inequality. If private agencies do not do this you have another supporter of socialized medicine. The obligation is clear in my opinion.

In conclusion, the thought arises that psychiatry, though relatively young as a specialty, is improving its therapeutic methods. More help is available to the emotionally and mentally ill now than at any time in the past, and improvements are continuing. However, if psychiatrists and their patients are to be set apart in hospital benefit planning and discriminated against in their professional efforts, the medical fraternity is lacking in the vision so long reputed to it.

THOMAS N. SPESSARD, M.D.  
712 Botetourt Street  
Norfolk, Virginia

\*In the next issue of the MONTHLY Dr. Richard Ackart will present the point of view of the Virginia Medical Service Association regarding the psychiatric case.

---

## SOCIETIES

---

### **The Warwick-Newport News Medical Society**

Held its dinner meeting on March the 9th, at the James River Country Club, under the presidency of Dr. William A. Read of Newport News. Dr. Edward P. Cawley, Professor of Dermatology at the University of Virginia, was the guest speaker. His topic was "Diagnosis and Treatment of Melanoma and a Discussion of Nevi". Dr. F. Ashton Carmines of Newport News is secretary.

### **Richmond Academy of Medicine.**

Dr. Alfred D. Dennison, Jr., addressed the regular meeting of the Academy on March 9, which was put on by the General Practice program. His subject was "Diagnosis of Unusual Complications Following Myocardial Infarction". He is with the Clinical Research Department of Eli Lilly and Company and is a specialist in Internal Medicine and Cardiology and engaged in private practice in Maplewood, New Jersey.

### **The Tazewell County Medical Society,**

At its regular meeting in December, elected the following officers for 1954: President, Dr. W. R. Strader, Richlands; vice-president, Dr. C. C. Bowen, also of Richlands; and re-elected Dr. Mary Elizabeth Johnston of Tazewell as secretary-treasurer.

At its regular semi-monthly meeting on February 17 at the River Jack Restaurant with Dr. Strader presiding, the scientific program consisted of viewing a film prepared and released by Lederle Laboratories on "The Treatment of Parkinson's Disease".

### **Fairfax County Medical Society.**

At the meeting on February 9th, at the home of Dr. William Harris in Falls Church, a paper was read by Dr. Joseph Beinstein, Arlington, on "Recent Advances in Hypertensive Therapy".

It was noted that attendance at these meetings has increased by 200% during the past year.

The meeting on March 9th was at the home of Dr. Alice Kiessling in Falls Church. Dr. William Thornton Spencer spoke on neurological aspects in general practice.

ALICE H. KIESSLING, M.D.

### **The Princess Anne County Medical Society,**

At its last regular meeting, elected Dr. Ralph Stata of Oceana as president and re-elected Dr. James W. Todd of Virginia Beach as secretary.

### **Lynchburg Academy of Medicine.**

At the regular meeting of the Academy on February 8th, Dr. H. St. George Tucker of the Medical College of Virginia, Richmond, spoke on "Endocrine Disturbances of Childhood".

It was moved that the annual business meeting, usually held in December of each year, be changed and held in June, officers being elected at that time to take office in September.

FRANK N. BUCK, *Secretary*

### **The Virginia Peninsula Academy of Medicine**

Met on February 17th at the Coca-Cola Building in Newport News. Dr. Harry Bakwin, Professor of Clinical Pediatrics, New York University, spoke on "Psychic Disturbances in the Adolescent Child".

At the meeting on March 17 at the Langley Air Force Base, the speaker was Dr. Robert J. Coffey, Director of the Surgical Department at Georgetown University, Washington. The subject of his address was "Polyps and Their Relation to Carcinoma of the Rectum".

Dr. Chester D. Bradley and Dr. W. T. Watkins, Jr., both of Newport News, are president and secretary respectively, of the Society.

---

## NEWS

### **On to California!**

"Go West, young man . . ." is as up-to-date a piece of advice today as it was in Horace Greeley's time. More than 11,000 physicians from all parts of the country are expected to heed this counsel by attending the AMA's 103rd Annual Meeting, June 21-25, in San Francisco. This year's scientific pro-

gram offers physicians an opportunity to see and hear about the newest developments in medicine.

All scientific and technical features will be located in the convenient Civic Center—with both the Scientific and Technical Exhibitions in the Civic Auditorium. The Scientific Exhibit, presenting more than 200 displays of new treatments and techniques, will

provide plenty of opportunity for discussion of individual problems with the demonstrators. More than 350 commercial exhibits, including presentations by leading drug, supply and publishing firms, will make up the Technical Exhibit in the Auditorium and adjoining large Portico.

General scientific sessions will be held in the High School of Commerce Auditorium. Scientific section meetings and motion picture films will be held in the Masonic Temple, High School of Commerce, War Memorial Veterans Auditorium, California Hall and other buildings adjacent to Civic Center. The House of Delegates will convene at the Palace Hotel.

### Scientific Exhibits for Annual Meeting.

Members of The Medical Society of Virginia will soon receive detailed information and application forms concerning scientific exhibits for the annual meeting October 31-November 3.

The procedure is somewhat different this year since the meeting is a joint affair with the Medical Society of the District of Columbia and will be held at The Hotel Shoreham in Washington. All applications should be returned to Dr. Alfred A. J. Den, Chairman, Committee on Scientific Exhibits, First Interstate Scientific Assembly, Medical Society of the District of Columbia, 1718 M Street, N. W., Washington 6, D. C., *not later than May 1.*

### The Southwestern Virginia Medical Society

Will meet at the Martha Washington Inn, Abingdon, Virginia, on April 15, 1954 at two o'clock p.m.

The Afternoon Program will be:

Symposium on Reontgenology, moderated by Dr. V. W. Archer of the University of Virginia.

Dr. Gerhard Gabriel, Abingdon.....Stomach

Dr. Charles Peterson, Roanoke.....Head

(Or a member of his group)

Dr. George McCall, Bristol.....Chest

Dr. Carey Stone, Radford.....Skeletal System

Each paper to be followed up with a question period and the symposium concluded by Dr. Archer.

"The Newer Drugs in the Treatment of Hypertension" by Dr. Homer A. Sieber of Roanoke, this will be about 30 minutes long.

Dr. Charles A. Young, Jr., of Roanoke, will give a paper on "Common Diseases and Congenital Anomalies of the Internal and External Eye."

Evening Program at seven o'clock p.m.

Banquet

Dr. V. W. Archer will give a short talk on his

objectives as president of The Medical Society of Virginia.

"Medical Aspects of Nuclear Energy."

1. Medical Uses of Radioactive Isotopes," by Dr. Malcolm P. Tyor, Internist with the Oak Ridge Tennessee Institute of Nuclear Studies.
2. "Procurement Safe Handling and Clinical Applications of Radioactive Isotopes" by Mr. James R. Mason, Chief, Allocations Branch, Isotopes Division.

### The Role of Education in the Control of Cancer.

We still face the cruel fact that perhaps only 15% of the people who develop cancer are being saved, whereas from 30% to 50% of them should be saved, based on present knowledge of cancer. Research and better facilities for treatment will not help those who fail to realize in time their need of help.

Education is perhaps the most effective weapon of public health. Nowhere can it be used with such telling effect as against cancer. Cancer is not hereditary or contagious. Fear and ignorance have long been responsible for a large part of the death toll from cancer. The public should be educated to recognize the "danger signals" of the disease.

Most cancer is curable when detected early and treated promptly and properly. The best insurance against the disease is a physical examination by a competent physician at least once a year.

Do your part in the campaign—learn about cancer. What you learn may save your life.

### Tri-State Medical Association of the Carolinas and Virginia.

The annual meeting of the Association was held in Charleston, S. C. on February 22 and 23, under the presidency of Dr. G. G. Dixon of Ayden, N. C. Dr. F. E. Kredel of Charleston, S. C. succeeded to the presidency and Dr. Paul D. Camp of Richmond, Virginia was named president-elect. Dr. A. A. Creecy of Newport News, was elected as Virginia's vice-president. The next annual meeting of the Association will be held at Hotel Chamberlain, Old Point Comfort, in February 1955.

### Northern Virginia Clinical Assembly.

The Fifth Annual Northern Virginia Clinical Assembly, sponsored by the Alexandria Medical Society, will be held on Sunday April 25, 1954 at the Magnolia Room, Hunting Towers, Alexandria, Virginia. The Scientific Program will be presented by the Faculty of the University of Virginia School of Med-



icine. For a nominal registration fee all physicians are cordially invited to the Scientific Program, noon luncheon, and evening cocktail party. Physicians' wives and other guests are welcome.

### **Arlington Society Publishes Bulletin.**

The first issue of the Arlington County Medical Society Bulletin was issued on February 15th and is scheduled to be published monthly. This replaces the former News Letter to their members and is the official news publication and will contain items of news, letters to the editor, and scientific articles including case reports. The cost of the Bulletin is handled through advertisers.

The first issue is a very attractive and interesting four-page bulletin and contains items of interest on a local, state-wide and national basis as well as calendars of coming meetings and medical lecturers. The editorial staff is composed of Drs. Lloyd B. Burk, Jr., A. R. MacPherson, and Albert Rigsbee.

### **Dr. K. D. Graves,**

Roanoke, was installed as vice-president of the Federation of State Medical Boards at their annual meeting in Chicago, February 7-9. Dr. Elmer W. Schnoor, Grand Rapids, Michigan, succeeded to the presidency, and Dr. M. H. Crabb, Fort Worth, was named president-elect, with Dr. Walter L. Bierring, Des Moines, secretary-treasurer for the 40th year.

### **Dr. John P. Lynch,**

Richmond, has been named chairman of a five-member advisory committee to the Instructive Visiting Nurses Association. Other members are Drs. Coleman Booker, Hubert Dougan, James B. Black, and Gwendolyn Hudson.

### **Dr. B. L. Phillips Honored.**

A tea was given by the Powhatan Hill Junior and Senior Woman's Clubs of Richmond on February 21st in honor of Dr. Phillips who is celebrating his fortieth year of practice in that section of the city.

### **Calendar of Coming Events.**

The Monthly will soon feature a Calendar of Coming Events—both local and national.

Should you wish the meetings of your Society, specialty group, etc., to be listed, the information should reach the Editor not later than the 10th of each month.

### **Dr. Philip Coleman,**

Richmond, was Visiting Chief for Post Graduate Medical Education Program in Wilmington, N. C., February 3-5, during which time he addressed the New Hanover County Medical Society on "Carcinoma of the Lung". During the three day program, surgical subjects of interest to the general practitioner were discussed and daily ward rounds were held at the James Walker Memorial Hospital.

### **Examinations for International College of Surgeons.**

Qualifying examinations for fellowships in the International College of Surgeons will be held on May 3 and 4. Written examinations will be given at Cook County Graduate School of Medicine in Chicago on the morning and afternoon of the 3rd, and clinical examinations will be held at Cook County Hospital on the 4th.

### **The Memorial and Crippled Children's Hospital,**

Roanoke, held its Fifth Annual Post-Graduate Day on March 24th. The following scientific program was presented: Medical and Surgical Management of Peripheral Vascular Diseases by Dr. Keith S. Grimson, Duke University; Clinical-Pathological Conference with Dr. Alto E. Feller, University of Virginia, as clinician, and Dr. James C. Gale, Roanoke, pathologist; Immunization Against Poliomyelitis by Dr. Edward C. Curnen, University of North Carolina; Panel Discussion on Uses and Complications of Therapeutic Agents for Infections with Dr. Feller as moderator; and Recognition and Management of Ureteral Injuries by Dr. Thomas Moore, University of Tennessee.

### **Dr. J. M. Emmett,**

Clifton Forge, has been reappointed by Governor Stanley for another four-year term on the board of visitors of the University of Virginia.

### **American Society of Medical Technologists.**

The 22nd annual national convention of this Society will be held at Miami Beach, Florida, June 13-17. The co-headquarters hotels are the Delano and DiLido.

### **"March of Medicine" Programs.**

The first of the new series of television programs by Smith, Kline and French Laboratories and the American Medical Association was on March 11th,

the subject being on overweight. The next show will be held on April 29th with arthritis as the topic. The third program will be on June 24th, the subject to be announced.

These programs will be on the NBC television network at 10:00 P.M., replacing the "Martin Kane" show.

#### **Mental Hygiene Society Changes Name.**

The Mental Hygiene Society of Virginia changed its name at its Annual Meeting, February 12-13, in Charlottesville, and elected new officers. It is now the Virginia Association for Mental Health and Dr. Granville L. Jones, Superintendent of Eastern State Hospital, Williamsburg, is president. Other officers elected were: Mrs. Overton Dennis of Richmond, 1st Vice-President; Dr. Rex Blankinship of Richmond, 2nd Vice-President; Miss Martha Bell Conway of Richmond, Recording Secretary; and H. Coleman Baskerville of Richmond, Treasurer.

The Association will coordinate Mental Health Week activities in Virginia, May 2-8, and will participate with the National Association for Mental Health in the Mental Health Fund Campaign during the month of May.

#### **Polio Vaccine Tests.**

Two methods of conducting the nationwide polio vaccine tests this spring will be followed by the National Foundation for Infantile Paralysis, it has been announced by Dr. Hart E. Van Riper, Medical Director.

Making public a letter from the National Foundation's Advisory Committee on Vaccination to the editor of the Journal of the American Medical Association, Dr. Van Riper stated that in some states half the school children in the first, second and third grades in selected counties will be given the trial vaccine and the other half will be given an ineffective substance. In other states children in the second grade only will receive the vaccine, with first and third grade pupils acting as statistical controls.

The combination of these two plans will assure a valid evaluation of the trial vaccine, he said. In case the amount of trial vaccine available is less than that originally contemplated, the Committee recommended that by far the larger part of it be used in areas where the first plan can be properly administered.

The states in which the studies will be conducted

are now being chosen, he added. Because of the necessity for additional facilities such as accessible virus research laboratories, only a few states will be selected to conduct the studies involving the giving of the vaccine to one-half the children in the first three grades.

The vaccine trials are to begin in late March or early April.

#### **The Medical Library Association**

Will hold its fifty-third annual meeting June 15-18, 1954, in Washington, D. C. The headquarters will be the Hotel Statler, and the official host the Armed Forces Medical Library.

The program will include a discussion on medical research by embassy attaches, tours of the National Institutes of Health, the National Naval Medical Center, and of the Armed Forces Medical Library.

Further information can be obtained from Lt. Col. Frank B. Rogers, Armed Forces Medical Library, 7th Street and Independence Avenue, S. W., Washington 25, D. C.

#### **The Stoneburner Lecture Series**

And a Symposium on Pulmonary Disease were put on by the Medical College of Virginia, Richmond, in March. Evening lectures were given on March 24 and 25 by Dr. Alvan L. Barach, Clinical Professors of Medicine, College of Physicians and Surgeons, Columbia University, New York, and a number of interesting subjects were discussed by prominent speakers during the days of March 25 and 26.

#### **The William H. Osborn Foundation**

Has been established in honor of the late Col. W. H. Osborn, North Carolina industrialist and philanthropist, as a loan fund without interest to help alcoholics of low income arrange for hospitalization and treatment under conditions set forth by the trustees. This is to be a revolving fund to aid in the rehabilitation of deserving alcoholics throughout the Southeast, according to Mrs. Osborn, president of The Keeley Institute, at Greensboro, North Carolina.

#### **The International Congress on Diseases of the Chest**

Plans to hold its third congress in Barcelona, Spain, October 4-8, 1954. Information as to presenting papers, scientific and technical exhibits, hotel accommodations and pre- and post-convention tours may be secured from the Executive Director,

American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

### **National Fund for Medical Education.**

Congressman Richard H. Poff, of Virginia's Sixth District, has introduced a bill in the House of Representatives of the United States, with the approval and consent of the American Medical Association, to incorporate the National Fund for Medical Education. The Fund is a cooperating agency of the American Medical Education Foundation and seeks its funds primarily from business and industry.

Commenting upon the bill, Congressman Poff stated, "I am convinced that this organization is carrying on work of vital importance to the welfare of the Nation. In view of its national character, its service to the medical life in all parts of the country, the National Fund for Medical Education is uniquely qualified for a national charter. I am of the opinion that such a Federal charter will be of aid in accomplishing the important objectives of this organization. Moreover, this endeavor, supported and managed as it is by private enterprise, is an effective answer to increasing public clamor for federal subsidies for medical education. What the government subsidizes it controls. My bill will not cost the federal government one dime."

### **Our Responsibility.**

When it comes to medical education, too many of us are prone to forget how much we received from our medical schools. Although we continue to expect more and more of them, we little realize their problems and have been so very careless in assuming responsibility which would help solve them.

If they are to continue their present usefulness, they must have funds which are not now available. All of us want to see them expand their facilities

and increase their effectiveness in meeting the ever increasing demands for student and graduate medical education.

The American Medical Education Foundation was organized to raise funds from individual physicians and medical groups for that purpose, and to try to avoid governmental aid and control. If our goals are to be realized and our schools are to be kept free, all physicians must make up the difference by voluntarily contributing to the A.M.E.F.

I only hope that all physicians will come to sense their true responsibility and join in making the A.M.E.F. campaign a real success.

JAMES L. HAMNER, M.D.

### **Doctor's Office—**

Ideal location outside of Washington in expanding community of Alexandria, Virginia. Complete 5-room house available for use as office in area needing services of a physician. Owners willing to assist Doctor to get started. Telephone Mr. Charles Gerstein for appointment—TE-6-9378—or write him at 13 East Myrtle Avenue, Alexandria, Virginia. (Adv.)

### **For Sale.**

Ranch type cottage furnished. Three bedrooms, large living room with fireplace, bathroom, kitchen, front porch and large breezeway. Located off highway #33, about 60 miles from Richmond and 5 miles from Urbanna. Over two acres of land with sandy beach. Gas stove, electric refrigerator and electric water pump. If interested, write "Cottage", care Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (Adv.)

### **For Sale.**

40-Bed, well equipped, small town hospital. Address Physician's Hospital, Incorporated, Warrenton, Virginia. (Adv.)



## OBITUARIES

### Dr. Henry L. Segar,

Who practiced medicine in Warsaw for fifty-three years, died March 6 after a brief illness. He was eighty-four years of age and a graduate in medicine from the Medical College of Virginia in 1898. In addition to his practice, Dr. Segar operated a farm near Warsaw and was for fifty years a vestryman in the Episcopal Church there. He was a member of the Northern Neck Medical Society, a Life member of The Medical Society of Virginia, and a director of the Northern Neck State Bank. Three sons survive him, his wife having died in 1948.

### Dr. Alvin Fleet Bagby,

Richmond, died February 26 in Sarasota, Florida, where he was spending the winter. He was a 1912 graduate of the Medical College of Virginia and was engaged in the practice of eye, ear, nose and throat diseases in this city until his retirement seven years ago. His wife survives him. Dr. Bagby was formerly a member of The Medical Society of Virginia.

### Dr. Henry Bernard Bristow,

Tappahannock, died February 19th, at the age of seventy-five. He was a graduate of the Medical College of Virginia in 1903 and had practiced in Essex County since that time. His wife and three children survive him.

### Dr. Everett I. Evans.

The Richmond Academy of Medicine on February 23, adopted the following appreciation of Dr. Evans:

Everett Idris Evans died on January 13, 1954. Medicine has lost an outstanding student and teacher, and this community, a distinguished citizen.

Born in Norfolk, Nebraska, April 15, 1909, of Welch stock, he was educated in Nebraska and Iowa to the B.S. degree at Coe College, and toward a graduate career at the University of Chicago for a Ph.D. in 1934 and his M.D. in 1936. Residency appointments took him to Philadelphia, Boston and Richmond in 1942. In the 12 years since this first appointment at the Medical College of Virginia he organized research facilities, secured generous research grants from the Army, Navy and Public Health Service, developed an outstanding experimental and clinical laboratory, and made as well as stimulated others to make valuable fundamental contributions to the science of medicine. In his associations with those who came into these laboratories, he possessed that unique ability to offer guidance without pointed direction, so that each individual worker felt a research freedom which is seldom attained in the large grant "projects".

He possessed those capacities which qualify but few as a philosopher in the medical arts and sciences. Under

his influence, students sensed the meaning and the mystery of many of the processes of life. The underlying problems of disease which so often are overlooked or lost in dull academic rhetoric became vital and stimulating. Under his influence his associates and colleagues examined themselves, their methods, their reasoning, their observations and their conclusions. His patients too felt the assurance that all of the experience which could be focused upon their disease problem had been effective under his care.

Impatient with mediocrity, uncompromising in his aspirations for the work of his laboratory or the welfare of his colleagues and associates, Dr. Evans lived intensively himself. He was capable of enthusiasm and elation and of discouragement and depression which were a part of his creative genius.

He was a man of few but intense personal loyalties and deep friendships. Outstanding among these was his chief in surgery in the Medical College of Virginia. Through an uncommonly vigorous and demanding life which the military and the scientific world exacted of him, his family—his devoted wife LaVerne—remained the home of his restless spirit. His associations with three growing children were among the deepest satisfactions of his life.

There are men today who are the richer for having known Everett Evans—richer intellectually, perhaps more sensitive emotionally, certainly more courageous in their quest for truth and common sense. He was respected, admired, and known internationally. In the tributes which have come from all parts of the world upon the death of Dr. Evans it is striking that this admiration for his scientific abilities is so often expressed in terms of personal warmth and genuine fellowship.

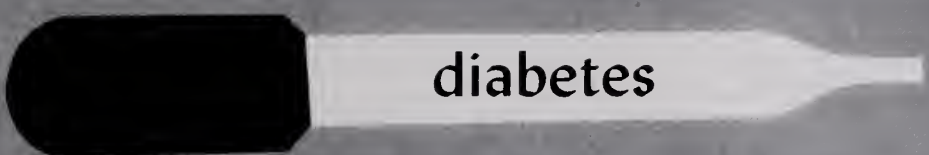
Of his honors only a few will be read this evening, and a more complete list will be appended for the record.

While Professor of Surgery and Director of the Surgical Research Laboratories at the Medical College of Virginia he served also as:

- 1940-46—Responsible Investigator, Office of Scientific Research and Development (Shock and Burns)
- 1946 —Committee on Surgery, National Research Council
- 1948 —Committee on Atomic Casualties, National Research Council; Committee on Burns (Chairman), National Research Council; Principal Investigator, Research and Development Board Office of the Surgeon General, Department of the Army; Surgical Consultant, Atomic Bomb Casualty Commission, Far East Command (Japan).
- 1952 —MacArthur Lecturer, University of Edinburgh, Scotland; Hunterian Lecturer, Royal College of Surgeons, London; Distinguished Service Award, University of Chicago
- 1953 —Coe College, Distinguished Service Award

Spectfully submitted,

JOHN B. TRUSLOW, *Chairman*  
G. WATSON JAMES



diabetes

"the ideal detection center is the office of the family physician"

Found: 20,255 "new" diabetics in one year in the private practice of 5000 physicians responding to a nationwide poll.\* Of these, 81% were detected by urine-sugar analysis; 62% of the physicians used *Clinitest*.

Only 19% of the diabetics in this survey were detected by findings other than glycosuria. "Every patient therefore, should have at least one urinalysis as part of his examination, even if the purpose of his visit is only the removal of wax from the ears."<sup>2</sup>

CLINITEST<sup>®</sup>

BRAND

for detection of urine-sugar

\*Data from nationwide poll: Diabetes in daily practice

70% were over 40.

40% had a family history of diabetes.

65% were overweight.

1. Blotner, H., and Marble, A.: New England J. Med. 245:567 (Oct. 11) 1951.

2. Steine, L.: GP 8:45 (July) 1953.

Ames Diagnostics

Adjuncts in clinical management



AMES

COMPANY, INC • ELKHART, INDIANA

Ames Company of Canada, Ltd., Toronto

83154



**NEW**

in addition  
to Liquid Lactum...

# POWDERED Lactum

Powdered Lactum® presents all of the outstandingly superior qualities inherent in Liquid Lactum in a form preferred by many physicians. Powdered Lactum is homogenized, pasteurized and then spray-dried to produce a powder that can be reliquefied quickly and smoothly.

## Lactum formulas:

- provide a more than ample margin of protein for optimal growth and development—25% more than the National Research Council's Recommended Daily Allowance.
- contain all the natural nutrients of whole milk in normal proportions. No natural fat is removed to be replaced with cheaper animal or vegetable fats. All vitamins and minerals are kept in the original amounts. And Lactum® formulae

provide twice the amount of vitamin B<sub>6</sub> as breast milk.

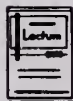
- include sufficient added carbohydrate (Dextri-Maltose®) to spare protein and permit efficient fat metabolism—an added margin of safety for the infant.

- are exceptionally easy to prepare... 1 ounce of Liquid Lactum to 1 ounce of water, or 1 measure of Powdered Lactum to 2 ounces of water, make a formula supplying 20 calories per fluid ounce.

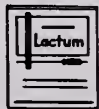
Ideal as a formula for routine use, Powdered Lactum is also exceptionally useful for supplementary and complementary feedings.

For optimal growth and development... for uncomplicated nutritional progress... specify Lactum, Liquid or Powdered.

LIQUID



POWDERED



# Lactum

The nutritionally sound formula for infants

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

**MEAD**

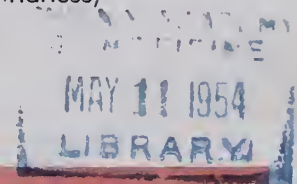


# VIRGINIA MEDICAL MONTHLY

## *Contents*

- Guest Editorial, Walter B. Martin . . . 201
- Cardiovascular Emergencies, Their Diagnosis and Treatment,  
Paul D. Camp . . . 202
- The Heart and Gall Bladder Disease, Julian R. Beckwith, Ambrose G. Hamp-  
ton, Dwight T. Kernoodle, Charles F. Tate and J. Edwin Wood, Jr. . . . 211
- Fat Embolism, H. Rowland Pearsall and Edgar N. Weaver . . . 215
- The Psychogenic Etiology of Peptic Ulcer, R. W. Garnett, Jr. . . . 223
- Rehabilitation from the Viewpoint of a Physician in Industry,  
C. L. Savage . . . 226
- The Role of the General Practitioner in the Prevention of Blindness,  
E. G. Gill . . . 228

(Continued on page 6)



**sustains contraction of postpartum uterus**

# 'Ergotrate Maleate'

(ERGONOVINE MALEATE, U.S.P., LILLY)

**to prevent hemorrhage, lessen risk of infection**



IN 1/320-GRAIN TABLETS AND AMPOULES

provides  
relief from  
a wide variety  
of seasonal  
allergies

BENADRYL Hydrochloride  
(diphenhydramine hydro-  
chloride, Parke-Davis)  
is available in a variety of forms  
— including Kapseals,<sup>®</sup> 50 mg.  
each; Capsules, 25 mg. each;  
Elixir, 10 mg. per teaspoonful;  
and Steri-Vials,<sup>®</sup> 10 mg. per cc.  
for parenteral therapy.

# Virginia Medical Monthly

Vol. 81, No. 5  
WHOLE No. 1223

RICHMOND, VA., MAY, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## GUEST EDITORIAL

### Voluntary Health Insurance

THE growth of prepayment insurance against the cost of hospitalized illness, including the cost of medical and surgical care in hospitals, has been amazing. At the present time about ninety-two million people carry some form of insurance against the cost of hospitalization. There are seventy million who carry coverage for surgical care in hospitals and approximately thirty-five million for medical care in hospitals. The growth of this form of insurance has been so rapid that we have not had time to consider certain weak points in the program. These weaknesses have become more obvious as insurance has covered more groups and has become more comprehensive. It is desirable, of course, to further extend voluntary prepayment insurance both from the standpoint of covering a still larger segment of the population and of increasing benefits offered to the individual subscribers.

The ultimate objective of voluntary prepayment insurance is to cover practically all of the insurable people in the United States for the major part of the cost of their medical care. If it failed in this objective it will be because of abuses on the part of the patients or of the doctors. It is necessary for the physician to help conserve the resources of the prepayment plan by proper limitation on his charges, by expediting the patient's course in the hospitals and by care in avoiding the over-use of hospital facilities either in terms of days of hospital care or in the use of the diagnostic and therapeutic services provided by the hospitals. If these services are over-used there is either a break down of the service and consequent poor care for everyone, or the premium rate on that type of insurance goes up. The physician should be diligent in impressing upon the patient that he is a stock holder in a mutual company and it is not only his obligation but to his own advantage to conserve the resources of the company.

Rising premium rates due to excessive use or other abuses will price voluntary sickness insurance out of the market. We can rest assured that if abuses prevail and that, as a result, the rates are too high or coverage is inadequate, some form of government subsidy or even compulsory insurance will be forced upon us. We as physicians are in a better position than any other group to control over-use and to educate our patients in the importance of conserving a valuable asset. We are also morally obligated to control abuses that arise within our own ranks.

WALTER B. MARTIN, M.D.

EDITOR'S NOTE: Dr. Walter B. Martin is of Norfolk, Virginia, and President-elect of the American Medical Association.



## CARDIOVASCULAR EMERGENCIES, THEIR DIAGNOSIS AND TREATMENT\*

PAUL D. CAMP, M.D.,  
Richmond, Virginia

The prompt and correct diagnosis of cardiovascular emergencies and their proper treatment are among the most common problems confronting the general practitioner. In discussing this problem with you tonight, I shall try to deal with the situations as it has been my custom in the private practice of cardiology. In some instances where my experience has been rather limited, I shall rely upon the opinion of those who have had greater experience with a given method or a specific drug.

The arrhythmias are perhaps the most common cause of acute concern in patients with and without cardiac disease. Even patients who have normal hearts, and who are generally emotionally quite stable, may be upset and frightened by the occurrence of an arrhythmia and there may be symptoms, such as precordial aching or severe pain, vertigo, syncope, vomiting, and at times, congestive failure, if the heart is extremely rapid over a long period of time. Of course, the most serious disturbance of the circulation occurs with the ectopic arrhythmias with rapid rate—the paroxysmal tachycardias—and the time of the change from one mechanism to another, as from a tachycardia to a complete heart block, when there might be a ventricular standstill of varying lengths of time.

The paroxysmal tachycardias include paroxysmal auricular flutter, paroxysmal auricular fibrillation, auricular, nodal and ventricular tachycardia and ventricular fibrillation. Any of these tachycardias may revert to normal sinus rhythm within a short time or they may persist for hours, or at times days, thereby causing severe disturbance in the circulatory dynamics and perhaps death due to congestive heart failure, or coronary insufficiency, or myocardial ischemia. According to Henderson and others, a change from a rate of around 80 to 130, usually increases the minute volume output, for, despite the fact that ventricular and stroke volume may be decreased, the product of heart rate and stroke volume is increased. When the rate is between 130 and 180, however, no further increase in minute volume occurs, and with further increased

cardiac rate, total minute volume is actually reduced. This may result in cerebral anoxia, fainting or convulsions, as well as myocardial ischemia mentioned above. If the tachycardia persists, there may be further decrease in cardiac output with shock and failure. One interesting example of this was described quite a few years ago by Paul White and me, i.e., cases of status anginosus, resembling coronary thrombosis, but precipitated by paroxysmal tachycardia and relieved as soon as the paroxysmal tachycardia was controlled; our cases had the usual Heberden's angina of effort between attacks of tachycardia. During, and at times for hours after, an attack of paroxysmal tachycardia, the electrocardiogram may show the typical RS-T and T wave changes of coronary insufficiency. In fact, this is a wonderful test of the sufficiency of a patient's coronary arteries.

The supra ventricular tachycardias, auricular or nodal tachycardia and auricular fibrillation and auricular flutter, may occur in a normal or an abnormal heart. They may be precipitated by emotional disturbances, especially sudden ones. These arrhythmias occur most often in association with rheumatic or arteriosclerotic heart disease, and a recent study points out that the basal metabolic rate is normal in over 85% of cases of supra ventricular tachycardia. Ventricular tachycardia almost always is an indication of organic heart disease and is not an infrequent complication of myocardial infarction and adds gravity to the prognosis.

Since in many cases of supra ventricular tachycardia, the rhythm will revert to normal after a relatively short time, it is not always necessary to institute treatment at once and simple reassurance may be all that the patient needs. All cases should be carefully watched, however, for failure or shock may develop rather suddenly. I believe it is wise to start therapy in cases of ventricular tachycardia as soon as a definitive diagnosis is established, for, as already noted, this type of tachycardia almost always occurs in patients with organic heart disease and further strain on the already damaged heart may be harmful or even disastrous.

\*Read in part before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.

Certain general measures may be of value in the treatment and prevention of tachycardias. These are rest, sedation and the avoidance of tobacco, alcohol, caffeine and emotional upset. I have one physician friend-patient, who used to go to football games and perhaps indulge in all of the above, and then come home and have paroxysmal auricular fibrillation, which, fortunately, was quickly controlled by quinidine. I am sure that there are many people who would rather risk an occasional bout of transient paroxysmal tachycardia, than to have to abstain or refrain from some of their greatest pleasures. Over-eating or eating certain food will bring on an attack in certain individuals.

Before attempting to institute any specific therapy, a correct diagnosis, at least as to whether the tachycardia is supra or infra ventricular, is essential. I might add here that in some cases the only way to be absolutely certain is to have the help of the electrocardiogram. Unless the exact mechanism of the tachycardia has been shown to be due to ventricular tachycardia or auricular fibrillation, it is worthwhile to try to terminate the attack by pressure on the carotid sinus or eyeballs or by causing the patient to gag by means of mechanically stimulating the pharynx with a feather. Pressure over the carotid sinus is applied with the patient in the prone position and with the head turned away from the side to be stimulated. The site to be pressed is recognized as a pulsating area which is painful to pressure at the angle of the jaw. The right carotid sinus is more sensitive than the left. Pressure should be applied on first one side, then the other, not both sides at once, and not over ten to twenty seconds at the time, especially in older people; it should be stopped sooner if slowing of the heart rate occurs. Cases of syncope, convulsions and even hemiplegia have been reported following this procedure. Certain drugs, such as Mecholyl or Lanatoside C, augment the carotid sinus effect which others, such as Benzedrine, Epinephrine, Neosynephrine and large doses of quinidine may inhibit the effect.

Eyeball pressure, according to Sam Levine, stimulates the oculocardiac reflex and produces inhibitory effects upon the auricular muscle and atrial ventricular conduction. Pressure for twenty to thirty seconds is applied over both eyeballs simultaneously, the finger pressing on the closed eyes below the supra orbital ridge and not over the cornea. Some patients

may respond to this method of treatment, but not to carotid sinus pressure.

#### AURICULAR FIBRILLATION

Auricular fibrillation is the most common arrhythmia of serious import. In this section it occurs most frequently in patients who have arteriosclerotic heart disease and, secondly, in patients with rheumatic heart disease. However, it frequently occurs in patients with thyrotoxicosis and in such circumstances it is very difficult to control the ventricular rate or revert the rhythm to normal sinus until the thyrotoxicosis has been controlled. Occasionally the strain thrown on a relatively normal heart by pneumonia and other febrile diseases or by extreme physical exertion will set off auricular fibrillation in a relatively normal heart.

While working with Sir Thomas Lewis, I thought the circus movement mechanism of auricular fibrillation was a fact, not a theory. However, when I went over to Vienna and worked with David Scherf, I became acquainted with the theory that both auricular fibrillation and auricular flutter are the results of stimuli arising in a single, exciting ectopic focus. According to the latter opinion, all auricular arrhythmias have a similar mechanism, the only difference between them being the number and frequency of impulses arising from a single focus. Prinzmetal and his co-workers have thrown a great deal of support to this theory.

Paroxysmal auricular fibrillation usually starts suddenly, and the ventricular rate ranges around 130 to 170 and the rhythm is, of course, totally irregular. There is a pulse deficit and, of course, the intensity of the heart sounds varies a great deal. Practically speaking, a rhythm that on auscultation appears totally irregular, associated with a ventricular rate of above 130, may be considered as due to auricular fibrillation and treated as such, even without electrocardiographic confirmation.

There are, in general, two main methods of treatment of paroxysmal auricular fibrillation, not associated with thyrotoxicosis or active rheumatic myocarditis. The choice rests between the use of digitalis or quinidine or the combination of the two. If the case has been proven by electrocardiogram to be due to auricular fibrillation, the reason for electrocardiographic proof is to rule out rare cases of ventricular fibrillation, very frequent ventricular premature contractions alone, or combined with ventricular tachy-

cardia, in which digitalis would be contraindicated. I personally should be inclined to use digitalis first, for, at times, the rapid ventricular rate may rather suddenly cause failure and/or shock. The above applies especially to patients with definitely demonstrable cardiac damage and to patients seen for the first time and in which the status of the cardiovascular system is uncertain.

Digitalization may be accomplished by various methods, using various types of digitalis preparation. I believe that each doctor should thoroughly familiarize himself with one standard oral method and one standard intravenous method, and then stick to one or the other of these unless some unusual situation arises.

If a patient is seen with paroxysmal auricular fibrillation and a rapid ventricular rate who has not been on digitalis and who is not in failure or shock, then I would be inclined to digitalize the patient orally, using Digitoxin, starting with milligrams 0.4, and repeating this again in four hours, and again in four to six hours, and if the ventricular rate were satisfactory, say 70 to 90 per minute, I would switch to whole leaf digitalis preparation, giving on the average of grains one and one-half daily. Digitoxin has the advantage of acting quickly even when given orally. However, it has the disadvantage of being excreted slowly and hence it is more likely to cause some untoward reaction, especially nausea and vomiting, which may persist. Some people prefer Digoxin, a glycoside of digitalis lanata. It has the advantage of being a pure substance of definite composition and is almost completely absorbed from the intestinal tract. Furthermore, it is eliminated rapidly and hence it is less apt to cause toxic effects, such as may occur with Digitoxin. The dosage required for digitalization varies a great deal from person to person and the dose must be adjusted for each individual. The digitalization dose of Digoxin varies from 1.5 milligrams to 5.0 milligrams. An initial dose of 1.0 to 1.5 milligrams may be tried and then 0.5 milligrams every six hours until the desired ventricular rate is obtained. The maintenance dose also varies from 0.25 to 0.75 milligrams daily and, again, I would prefer to switch to whole leaf digitalis.

If there were any doubt about the existence of failure or the possibility that the patient had been partially digitalized, I would use Lanatoside C (Cedilanid) intravenously. I have found this drug exhib-

its less toxic side effect and it is excreted fairly rapidly; furthermore, it seems to me more likely to cause certain supra ventricular tachycardias to revert to normal rhythm. The initial intravenous dose may be one-half of the total digitalization dose, i.e., milligrams 0.8, and then followed in four hours with milligrams 0.4, and in another four hours with milligrams 0.4, or in less urgent cases milligrams 0.4 may be given every four hours for four doses. In urgent cases the whole digitalization dose of milligrams 1.6 may be given at one time and I have never seen any ill effects from this.

Whole leaf digitalis may be used; however, its action is slower, and, again, I would prefer obtaining digitalization with one of the more rapidly acting drugs, and starting the patient on whole leaf maintenance dosage.

When the ventricular rate has returned to around 80, and if the auricular fibrillation persists, the use of quinidine sulphate may be considered; or it may be decided to use quinidine initially; in either case, the administration of the drug could be the same. Again, there are various methods of giving quinidine. It seems reasonable to acquaint oneself with a given method and stick to it unless contraindication arises. I usually use the following: Give the patient a test dose of quinidine, grains three, and if no untoward symptoms develop, then give quinidine sulphate, grains six, every two hours for five, six or even seven doses, if normal rhythm is not restored before. I hasten to add that I use the above procedure only on patients in the hospital and that I insist that the intern check the patient, especially the rate and rhythm at the apex, before the administration of each dose. If the patient is treated in the home, then perhaps we could give, after the test dose, grains three every three hours, and if this did not secure the desired results, we might try grains six every three hours during the day. When the rhythm has been restored to normal, the dose is reduced gradually and after a period of a week or so it may be left off; on the other hand, if there is a tendency for any arrhythmia to recur it may be necessary to continue a maintenance dose of grains three, three times a day or every four hours, or this may be increased to six to nine grains, three times a day or every four hours, depending on the individual case. In reducing dosage, I usually taper off with grains three, every two hours for a day, then



grains three, every three hours, and then perhaps grains three every four hours. Quinidine, if used properly, is a safe and good drug. If not used properly, the results will be poor and it must be remembered that in contradistinction to digitalis, quinidine has practically no accumulative effect and is rapidly excreted, so give what is needed to get results, no more and no less. The most common premonitory signs of over-dosage may be grouped under "cinchonism," and include tinnitus, deafness, headache, blurring of vision, nausea and vomiting, abdominal cramps and diarrhea. If given rapidly intravenously, there may be respiratory depression, convulsion and cardiac standstill, from which death may result. Quinidine may produce certain electrocardiographic changes, the most common being widening of the Q-T interval; this is due to widening of the R-T interval and only occasionally to widening of the QRS complex, and when the latter occurs it indicates a toxic effect and careful watch should be maintained and perhaps the quinidine discontinued.

Intramuscular quinidine has been used but I see no definite need for it in auricular fibrillation.

Pronestyl has been used with good results by some in treating acute paroxysmal auricular fibrillation, but I prefer to save it for ventricular tachycardia and will discuss it there.

If digitalis is judged to be the cause of auricular fibrillation or other tachycardia, the use of potassium chloride or acetate given orally must be considered, and it is reported to eliminate the arrhythmia within thirty minutes. It may be given in doses of two to ten grams of a 20% solution in syrup of citric acid.

The treatment of auricular fibrillation, due to thyrotoxicosis, is first the treatment of the thyrotoxicosis and then the auricular fibrillation by one of the methods described below.

#### AURICULAR FLUTTER

The exact mechanism of the auricular physiology in auricular flutter differs in the two schools of thought as discussed above concerning auricular fibrillation. In auricular flutter the auricular rate varies between 250 and 350 but the auricular rhythm is usually regular. The ventricular rhythm is usually regular and may vary from 125 to 180, often it is 160, and I think that a fixed rate of 160, i.e., one not influenced by position, movement, etc., is very

apt to be associated with auricular flutter. The ventricular rate may vary quickly and the rhythm may change quickly due to varying degrees of auricular-ventricular block. Sometimes auricular flutter may be distinguished from auricular fibrillation by detecting regular venous pulsations in the neck at a rate of around 250. Often we have to rely upon the electrocardiogram for the final diagnosis, and if there is a complicating bundle branch block it may simulate ventricular tachycardia. Carotid sinus pressure may cause a sudden change in the ventricular rate, say from 160 to 80, i.e., exactly doubling the block, and this may return suddenly in a short time to 160. In auricular tachycardia the rate may drop from, say 200 to 70, and stay there.

The accepted treatment of auricular flutter is the use of digitalis, for, as has been stressed since Sir Thomas Lewis' original work in 1911, digitalis often will convert auricular flutter to auricular fibrillation and then the rhythm will become normal after the drug is discontinued. The method of digitalization of choice depends upon the urgency of the case and the same principles should be followed as discussed above under treatment for auricular fibrillation. If sinus rhythm does not occur within a relatively short time, say three to four days after leaving off the digitalis, then quinidine may be given orally as described above. Some cases of flutter persist despite digitalization to the point of nausea and despite full doses of quinidine. If the ventricular rate is 80, for example, because of a 4:1 block, I think the patient may be watched along and the rate and rhythm may stay the same for years.

#### AURICULAR AND NODAL TACHYCARDIA

Auricular and nodal tachycardia can be distinguished only by the electrocardiogram and sometimes not then. The treatment of these conditions is accepted as being the same. However, it is my clinical impression that auricular tachycardia will revert to normal rhythm more quickly with the usual treatment. These tachycardias do not necessarily indicate organic heart disease and are more frequently functional, and may be brought on by excessive use of tobacco or alcohol, infections, thyrotoxicosis, gaseous indigestion, emotional upset, and the like. The individual episodes may be very short lived and the patient may have three to four or seven to eight attacks of very short duration every day or so for many years. Many patients have learned

how to stop their individual attacks by various maneuvers which stimulate the vagus nerve, for example, holding the breath, coughing, vomiting, drinking ice water, lowering the head over a bed, and even standing on the head. In trying to establish the previous existence of attacks, it is important (as in every cardiac case) to take a detailed history, with special emphasis on whether or not there was a sudden onset and sudden cessation of the rapid palpitation or fluttering of which the patient complains. There may be a sensation of irregular palpitations at the beginning and ending of the episodes in cases which have premature contractions or extra systoles at this time. The attacks usually start very suddenly with a ventricular rate of about 180 to 220 per minute. The ventricular rate is usually faster than in flutter and there is no change in rate associated with change in position, exercise, etc. The rhythm is usually absolutely regular, whereas in ventricular tachycardia there is often a very slight irregularity sufficient enough to cause slight changes in the intensity of certain sounds.

The episodes may cease quickly and if the person has a normal heart there is no great haste about trying to stop the attack. Rest and relaxation are important, a mild sedative such as Seconal may help. When first seen by the doctor it is certainly wise to try carotid sinus pressure and/or eyeball pressure as described above in detail. If these measures are not successful and if the patient is not already fully digitalized, the treatment method of choice, in my opinion, is the intravenous administration of Lanatoside C, giving 1.2 milligrams or even 1.6 milligrams. Often within ten to thirty minutes the rhythm and rate return to normal. Other methods of digitalization may be tried. If Cedilanid is not used, then quinidine sulphate may be used, again giving grains six every two hours and checking the patient before each dose.

Syrup of ipecac, four to eight cc. by mouth, will often cause vomiting and thus stop an attack. It is unpleasant.

Mecholyl (acetyl beta methylcholine) has been used to some extent and is helpful in treating supra ventricular tachycardia. I rarely use it now. It may produce severe nausea, vomiting, diarrhea, severe precordial pain and occasionally collapse and shock, and deaths have been reported. It is given subcutaneously in doses of twenty milligrams and this may

be repeated in twenty to thirty minutes. It is always imperative to have atropine sulphate, grains 1/60 to 1/30, to be given intravenously for relief of the serious untoward symptoms. Acetyl-choline is a similar drug with less side effects. Neostigmine given in doses of 1.0 milligrams intramuscularly is also a useful drug for this purpose.

Neosynephrine given intravenously in doses of 0.5 to 1.0 milligrams reportedly often stops an attack within ten to thirty seconds. It produces a rise in blood pressure, stimulation of the cardio inhibitor fibers in the aortic arch and carotid body and reflex cardiac slowing. The blood pressure usually returns to normal in ten minutes. Obviously it should not be used on patients who have a high blood pressure during the attack.

Pronestyl has also been used and is occasionally helpful.

#### VENTRICULAR TACHYCARDIAS

Ventricular tachycardia, of these ectopic paroxysmal ventricular tachycardias is, of course, the most common; ventricular fibrillation, at least recognized as such clinically, is rather rare. However, it is believed that terminal ventricular fibrillation is frequent as a cause of death, particularly following myocardial infarction. Whereas the supra ventricular tachycardias are often functional, ventricular tachycardia usually is indicative of, and associated with, severe organic heart disease. It is not an uncommon complication of myocardial infarction and may occur under various conditions in people with organic heart disease, for example, marked physical strain, pneumonia and other febrile diseases. The onset is usually sudden, although the electrocardiogram beforehand may show frequent or short runs of ventricular premature contractions. The rhythm is practically regular but may not be absolutely regular at times. The rate varies from 140 to 180 to 200, usually nearer 200, and the rate is not changed by position, etc. The symptoms, in addition to apprehension, palpitations, throbbing in the neck, etc., may be those of coronary insufficiency, substernal aching and/or cerebral anoxemia and/or circulatory failure and shock. Before starting definitive and specific treatment in a patient suspected of this condition, an exact electrocardiographic diagnosis must be established, for, whereas digitalis is usually indicated in auricular or nodal tachycardia, digitalis is contraindicated in ventricular tachy-

cardia; it may initiate ventricular fibrillation in the already irritable myocardium. It must be remembered that digitalis often causes ventricular premature contractions and, if digitalis were discontinued in these cases, especially if the ventricular contractions arise from several different foci, there would be less frequent ventricular tachycardia. The mechanical measures of carotid sinus pressure and/or ocular pressure will not be helpful.

Quinidine still deserves the first trial in the treatment of ventricular tachycardia, as it usually causes the tachycardia to revert to normal when given orally. Occasionally the oral method does not stop the attack and in such cases quinidine may be given intramuscularly or intravenously; however, rather than use quinidine by these methods, I would prefer intravenous Pronestyl. Oral quinidine may be started on the grains six, every two hours, schedule, checking the patient, of course, before each administration. If the patient remains in good condition, but the attack persists for over six to eight hours, it may be necessary to give grains nine, every two hours. In the old days even larger doses were given; however, if one failed to get desired results with the above, it would be wise to switch to Pronestyl.

Procaine amide (Pronestyl) is a direct myocardial depressant. It is supplied in 250 milligrams capsules for oral use and in ampules containing 100 milligrams per cc. for intravenous use. If the oral route is used, 500 milligrams every three or four hours may be tried. However, if the attack is not stopped within a few hours, or if the patient is not doing well, I would switch to the intravenous route. When I give Pronestyl intravenously, I have a nurse or intern take the blood pressure as near as continuously possible and at the same time I have an intern or technician take the electrocardiogram, preferably on a direct writing machine; however, with practice one can watch the string shadow and guess pretty well what is going on. The change in the rhythm may be quite sudden and occur within twenty, thirty or sixty seconds after the start of the intravenous medication, or there may be further widening of the QRS complex and in either incidence the Pronestyl should be stopped at once. Pronestyl generally causes no serious reactions; however, a marked sudden drop in blood pressure may occur, resulting in temporary shock or even a cardiac standstill. Neosynephrine, one to five milligrams intra-

muscularly, has been recommended to counteract this reaction. Fortunately, so far I have not had to use the Neosynephrine. The Pronestyl is injected at the rate of 100 milligrams, or 1 cc., per minute, no faster, a careful watch being kept on the blood pressure and the electrocardiogram, and the whole 10 cc., or one gram, may be given in ten minutes if the attack doesn't stop and if there is no further widening of the QRS. Again, may I point out that as soon as the ventricular tachycardia ceases, the injection should be stopped. If the attack continues, the above procedure may be repeated every thirty to sixty minutes until the attack stops.

We have had very good results with Pronestyl intravenously and have used it in about fifteen cases of ventricular tachycardia and in no case had it failed to stop the attack. The results have been quite dramatic, and I feel sure that in one or two cases Pronestyl has actually been a life saving measure. One case, a man in his sixties, had had a recurrent myocardial infarction and had a ventricular tachycardia and his pulmonary oedema was getting progressively worse, and if ever a man apparently rapidly was approaching a lethal exodus, this one was. Pronestyl was given intravenously, his ventricular tachycardia reverted to normal rhythm and he rapidly improved and survived this attack.

Magnesium sulphate has been used in the past, given intravenously, ten to twenty cc. of a 20% solution. Potassium salts (e.g., potassium chloride, enteric coated tablets, in doses of 1 to 5 grams two to four times a day) have been reported to be particularly efficacious in ventricular tachycardia due to digitalis toxicity.

Ventricular fibrillation is rarely diagnosed clinically as the patient usually dies rather quickly or the rhythm changes. Clinically, it is very like Stokes-Adams syndrome due to cardiac standstill. If possible, an electrocardiogram should be obtained during the attack and, if the patient survives and has recurrent similar episodes, it is reasonable to assume that these too are due to ventricular fibrillation. Intravenous quinidine, as quinidine lactate six to nine grains, should be given at once and, although there is danger in this route of administration, the disease is often fatal and the chance worth taking. Pronestyl should be of definite help, although I personally have not tried it.



Complete heart block with sudden failure of idioventricular pacemaker and asystole is a common cause of Stokes-Adams syndrome, although a change from one rhythm to another may cause asystole and Stokes-Adams. Adrenalin is the immediate treatment of choice. In extreme cases in shock it may be given intravenously or directly into the heart. In the usual case, one-half to one cc. of 1:1,000 solution of adrenalin should be given hypodermically. This may be repeated as necessary if the attacks recur and are severe. Adrenalin in oil, one cc. may be given every twelve to twenty-four hours after the initial dose of adrenalin if the attacks tend to recur; likewise, Ephedrine sulphate, grains one-half, three to five times a day may be used.

A very interesting and perhaps far reaching paper was presented at the American Heart Association meeting in April by Zoll *et al.*, on "External Electric Stimulation of the Heart". "Electric impulses externally applied across the intact chest produced effective heart beats in humans with idioventricular rhythm and in humans and dogs with ventricular standstill. The effective electric stimuli are monophasic rectangular waves, 2 to 20 milliseconds long, and 40-150 volts in intensity. This method of external electric stimulation therefore provides an externally controlled supraventricular or ventricular pacemaker, discharging at any desired rate and behaving like a natural, intracardiac parasystolic focus. It can be used to study cardiac arrhythmias. It has also been used successfully to arouse the human heart from ventricular standstill, and to keep it beating as the sole pacemaker over a period of 5 days, until the intrinsic idioventricular pacemaker revived spontaneously".

I have not seen the machine as yet, but it is apparently rather simple and should be useful.

Time does not allow a discussion of the pathogenesis of cardiac failure, nor will I bore you with a description of paroxysmal nocturnal dyspnea (cardiac asthma) or the more severe acute pulmonary oedema.

When the patient is seen with cardiac asthma, the first thing to do is to get the patient up on the side of the bed or in a chair; this will often cause relief. If not, then I think morphine sulphate, grain  $\frac{1}{4}$ , and atrophine sulphate, grain  $\frac{1}{100}$ , may be given by hypodermic and often there is quick relief. Aminophyllin may be given intravenously or by mouth or by suppository. Since the occurrence of cardiac

asthma is evidence of left ventricular failure, I believe these patients should be digitalized or kept on a maintenance dose. If the patient is seen in acute pulmonary oedema or progresses to acute pulmonary oedema, then certainly morphine sulphate should be given intramuscularly at once, or if the pressure is low and the patient is in shock it may be given intravenously. I prefer atropine with morphine.

If oxygen is available it should be started at once, using the emergency mask and then switching to nasal oxygen or the tent. Intravenous aminophyllin grains  $7 \frac{1}{2}$  should be given at once, but administered slowly. Then if the patient has not been on digitalis some form of quick acting digitalis should be given. I prefer Cedilanid given intravenously in a full 1.6 milligram dose. Strophanthin K or Strophanthin G (Quabain) milligrams 0.25 intravenously may be used. In either case the patient should be digitalized immediately after the acute attack, the rapidity and method of digitalization depending upon the progress of the individual case. I think it is wise to use one of the mercurial diuretics intravenously, and I personally give Mercuzanthin 2 cc. intravenously as soon as the digitalis has been given. So called bloodless phlebotomy by use of tourniquets may be of help. The tourniquets are placed on three extremities using sufficient pressure to occlude veins, but not arteries. They are rotated every fifteen to twenty minutes. If the patient doesn't improve in thirty to forty minutes, and if there is no evidence of anemia, 500 to 800 cc. of blood should be withdrawn from a vein quickly and the result may prove dramatic.

Just a word about angina pectoris or paroxysmal coronary insufficiency. The treatment, of course, is nitroglycerine or, at times, amyl nitrite for the immediate episode. Prevention of attacks cannot be taken up here.

The most important thing in treating coronary occlusion with myocardial infarction is first to relieve the pain. If the pain is not severe, Demerol 50 to 100 milligrams may be given hypodermically. However, many cases require morphine sulphate  $\frac{1}{4}$  grains and again I use atropine sulphate. If this does not relieve the pain in twenty minutes, or if the pain seems to be getting worse, then the same dose may be repeated and occasionally it may be necessary to give morphine sulphate intravenously. I have found that "H.M.C." often relieves pain when morphine

sulphate and atropine fail, or, at times, if the patient has had morphine sulphate grains 1/2, I might give hyoscine hydrobromide grains 1/200 to grains 1/100. Oxygen by emergency mask or by tent should be given certainly in all patients who continue to have pain and, in fact, I believe it is wise to give it in practically all cases. Intravenous aminophyllin grains 7 1/2 often helps relieve pain and is certainly indicated in patients who show any tendency toward left sided failure and cardiac asthma. Some doctors use quinidine routinely in cases of myocardial infarction; I don't believe this is necessary; however, if any irregularity of the heart develops, such as premature contractions, I would use quinidine; so, also, if digitalis is to be given to that particular patient. The ectopic tachycardias should be treated as previously discussed. Some time ago it was considered unwise and dangerous to give digitalis to patients who had had an acute myocardial infarction. I believe this opinion has changed and if such a patient begins to have failure and if this is not relieved immediately by a salt free diet and mercurial diuretics, it seems wise to me to digitalize the patient. I believe it is wise to give quinidine, as noted, and unless the situation is urgent, rapid methods of digitalization need not be used.

Morphine is the drug of choice for relief of severe pain of coronary occlusion, but it has certain untoward side effects at times, such as nausea and vomiting, constipation, distention and depression of the renal function. Therefore, after the initial dose, or as soon as possible, it is wise to switch to Demerol 50 to 100 milligrams. Dilaudid grains 1/12 to 1/24, is a good drug and Pantopon is liked by some.

The most serious frequent complication of coronary occlusion is shock. This shock is due to a sudden failure of the heart to pump blood into the tissue. It is a fall in cardiac output and is not due to blood loss or to decrease in venous return. This so-called cardiogenic shock results from, in part, myocardial weakness connected with the infarction. However, I feel this is not the sole cause and there are certain reflexes which are poorly understood but which nevertheless play an important part in this phenomena. This shock may occur suddenly, or there may be a drop of blood pressure over a period of several hours until it gets to 80 or below, systolic. Theoretically, transfusions or intravenous fluids are not indicated,

and, in fact, may lead to further increase in venous pressure and congestive failure. Actually, however, this danger of inducing failure is not so great, as has recently been proven. Intra arterial infusions have been used, but I have not had personal experience with these. Neosynephrine in doses of 3-5 milligrams intramuscularly may be tried and repeated every two to three hours. Masters and Griffin have used ACTH and Cortisone, but without good results so far. At the present time I believe the best treatment for this type of shock is the use of Norepinephrine. Sampson *et al.* and Griffiths *et al.* reported good results with this procedure. We use essentially the same technique as Sampson, and is as follows: "The agent was diluted in 5 per cent glucose Ringer's solution, or other suitable menstruum. Usual initial dilution was 4 milligrams of the bitartrate monohydrate (Levophed) per liter. This was administered intravenously at rates varying from 4 to 80 drops (0.001 mgm. to 0.02 mgm.) per minute as necessary to maintain the blood pressure at appropriate levels. The concentration was increased to 8, 12 and even 16 milligrams per liter when adequate response was not obtained at lesser concentrations and to restrict parenteral fluid intake. Withdrawal was accomplished very gradually by decreasing the rate of infusion and often the concentration. Therapy was continued as long as necessary. The important thing in treatment of shock is time if the blood pressure of a previously normotensive drops to 100 systolic or below, or if a hypertensive drops to 110 systolic or below, and doesn't start back up in two hours treatment should be started."

Anticoagulant treatment should, in my opinion, be started on all cases of proven myocardial infarction unless there are definite contraindications in the individual patient. If a peripheral embolism occurs the treatment varies with the site of the embolus and the time that a patient is seen. Intra arterial papaverine 50-100 milligrams every four hours, given proximal to the occlusion, may be helpful. Likewise, intra arterial Priscoline, 50 milligrams every four to six hours, has been of help. Various ganglionic blocking agents have been used, e.g., C5 (bistrimethyl-ammonium pentone dibromide). I have had no experience with this. Embolectomy is the treatment of choice if a large artery is blocked and a competent surgeon can be obtained in eight to seventeen hours. Dr. Donald Daniel recently removed

a beautiful saddle embolus at the aortic bifurcation and the patient got along beautifully and is still alive—patient of Dr. Stewart Gilman.

Just a few words about syncope which occurs in many conditions and usually in patients who do not have organic heart disease. Neurogenic or vaso depressor syncope is the most common and is produced by a reflex peripheral vasodilatation and may be brought on by fright, pain, emotional upsets, etc. The usual treatment is simply to get the patient's head below his body. If clonic twitches occur, adrenalin .5 cc. 1:1000 col. hypodermically may be needed.

A hypertensive carotid sinus may be the cause of fainting in some patients. If the diagnosis can be established, the patient should be warned against things which will stimulate the sinus—tight collars, etc.—and it is reasonable to try ephedrine sulphate, grains 1/2, three times a day, or Paredrine, 60 milligrams, three times a day, or atropine sulphate, grains 1/200, three times a day.

Postural hypotension at times causes syncope, and the treatment depends on the cause if it can be found.

Hypoglycemia may also cause syncope and the treatment depends on the cause of the hypoglycemia.

Emergency treatment may be required during the acute stage of rheumatic fever and rheumatic pancarditis, because of the occurrence of pericarditis, congestive failure and arrhythmia. The latter two have been dealt with in general. If the patient with pericarditis develops an effusion enough to cause a tamponade, then a pericardial paracentesis should be done at once, and it may be life saving. Apparently ACTH and Cortisone are useful in the treatment of the acute severe stage of rheumatic

fever. The exact mode of action is not known and the question as to whether or not the ultimate progress and course of the disease is influenced has not, in my opinion, been proven. Nevertheless, since these drugs apparently can tide the patient over the very acute phase, their use is worthwhile. ACTH may be given somewhat as follows: 25 milligrams every six hours for six days, then a daily dose of 60 milligrams for seven days, then 40 milligrams for two or three weeks. Cortisone in a single daily dose of 200 milligrams may be given intramuscularly, or, if it can be given orally, it is more effective and can be given 75 to 100 milligrams every six hours for about the same length of time.

Finally, hypertensive encephalopathy and crisis may occur in the course of essential hypertension, malignant phase usually, or in acute nephritis, or in pheochromocytoma. These attacks, if they persist, may at times be helped by intravenous magnesium sulphate  $\text{SO}_4$ , 20 cc. of a 10% solution, or by withdrawal of spinal fluid, or by 50 cc. of 50% intravenous dextrose. Quite effective is the use of hexamethonium chloride, intravenously, starting with 5 mgm, then giving 5 mgm every two to three minutes until the desired drop in blood pressure has occurred. Another person must be on hand to record the blood pressure as the drug is given. If the blood pressure drops below the desired level, elevation of the foot of the bed will aid recovery of adequate blood pressure levels. On the other hand if no drop occurs, the effect may be potentiated by the head up position. It must be emphasized that this is an extremely powerful drug, and must be given cautiously. If the crisis is proved to be due to a pheochromocytoma the tumor should, of course, be removed.

### Professional Films and Authors.

To assure the listing of *all* outstanding professional 16 mm films—regardless of availability—in the forthcoming "Directory of Professional Motion Picture Films and Authors" now being compiled, all film authors are urgently requested to immediately write for film questionnaires. Other members of the

profession are invited to cooperate in this endeavor by forwarding this announcement to an author or by directly providing the film title and name and address of any film author. Please send your valuable information to: Professional Publications, Compilation Department, 2010 Kentucky Street, Lawrence, Kansas.



## THE HEART AND GALL BLADDER DISEASE\*

JULIAN R. BECKWITH, M.D.,  
AMBROSE G. HAMPTON, M.D.,  
DWIGHT T. KERNODLE, M.D.,  
CHARLES F. TATE, M.D.,  
and  
J. EDWIN WOOD, JR., M.D.,  
Charlottesville, Virginia

The purpose of this paper is to re-emphasize the apparent close association between the occurrence of coronary disease and cholecystitis, and to review briefly the evidence that impulses occurring in the biliary tract and other abdominal viscera may act as trigger mechanisms in the production of various cardiac arrhythmias and angina pectoris. It will also be pointed out that the differential diagnosis between the two conditions is often difficult because of the fact that the pain impulses may be transmitted to the same or overlapping areas in the spinal cord.

Examples of various cardiac abnormalities which improved after cholecystectomy will be given. In addition, a patient with gall bladder disease resembling angina pectoris and one with myocardial infarction resembling gall bladder disease will be described. The mortality of cholecystectomy in patients with heart disease and the probable benefits to be derived by cholecystectomy will be discussed.

The association between gall bladder disease and various affections of the heart has been known for many years; in fact, Osler in his *Practice of Medicine*<sup>1</sup> described palpitation, distress around the heart, convulsive seizures, and even fatal syncope occurring with acute gall bladder attacks. McKenzie pointed out that the famous English surgeon John Hunter, who died with angina, was found at autopsy to have gall stones.<sup>2</sup>

A review of some of the literature<sup>3,4,5,6,7,8,9,10</sup> reveals that the autopsy incidence of gall bladder disease in patients with coronary artery disease was found to vary from 17.5% to 48.8%, while only 11.5% of cases without coronary disease were found to have cholecystitis.

Clinical studies similarly show that 6.8% to 7.5% of patients with clinical coronary sclerosis (as evidenced by angina pectoris or myocardial in-

farction) had cholecystitis, as compared with 1.7% of cholecystitis found to occur in 26,499 hospital admissions.<sup>11</sup> Clinical reports appear to indicate clearly that patients who have anginal pain may be relieved after removal of a diseased gall bladder.<sup>12,13,14,15</sup> In two other patients, pain simulating angina reproduced by distention of the common duct through a T-tube was relieved by plastic repair of the common duct in one and after cholecystectomy in another. Thus, it appears that angina may be accentuated by cholecystitis and that distention of, or infection in, the biliary tract may cause pain resembling angina.

There are also reports that electrocardiographic changes indicating myocardial ischemia which are present in patients with cholecystitis may return to normal after cholecystectomy.<sup>15,16,17,18,19</sup> Experimentally, it is reported that these changes also occur in patients after distention of the common duct through a T-tube.<sup>20,21</sup> Similar changes may be brought about in animals if damage to the coronary arteries is produced first.<sup>21</sup>

Arrhythmias, including ectopic beats, auricular fibrillation, AV block, and sino-auricular block, have been described in association with cholecystitis with the disappearance of these arrhythmias following cholecystectomy.<sup>3,14,15,22</sup> These and other arrhythmias, including heart block, ventricular tachycardia, and cardiac standstill, have been produced experimentally by distention of the bile ducts. These phenomena are said to be more apt to occur in the presence of jaundice.<sup>23</sup>

The vagus nerve supplies the thoracic-abdominal viscera with afferent and efferent fibers. Physiologically, there is good evidence that vagal reflexes which are initiated in the abdominal viscera, including the esophagus, stomach, or gall bladder, may produce arrhythmias, cardiac standstill, heart block, and decrease in coronary blood flow,<sup>25,26,27,28,29,30,31</sup> and there is one experimental report which suggests that continuous vagal stimulation will result in my-

From the Department of Internal Medicine, Cardiovascular Division, University of Virginia.

\*Read before the annual meeting of The Medical Society of Virginia in Roanoke, October 18-21, 1953.

ocardial damage.<sup>32</sup> This makes one wonder if continuous irritation in the gall bladder could produce myocardial damage by constant vagal stimulation.

Anatomically, pain fibers from the gall bladder and heart may overlap.<sup>34</sup> Usually, however, the innervation of the gall bladder is through the visceral afferent fibers from the second to the tenth thoracic segments and possibly the first through the twelfth on the right. In some instances similar fibers run from the fifth to the tenth segments on the left. The pain fibers which originate in the heart and coronary arteries may be transmitted therefrom to the spinal cord at the level of the first through the fifth thoracic segments. Accessory fibers, however, may arise in the gall bladder, which transmit impulses to segments usually receiving such impulses from the heart, and in like manner impulses arising in the heart may be transmitted to the segments usually receiving gall bladder impulses. Thus, pain resembling that of gall bladder disease may arise in the heart and cholecystitis may symptomatically resemble coronary insufficiency.

The following case reports will serve to illustrate examples of the close association between heart disease and the gall bladder:

*Case I. Attacks of Paroxysmal Auricular Tachycardia Which Ceased After Cholecystectomy.*—Mrs. J. H., a 59 year old lady, was admitted 28 February 1952, and discharged 23 March 1952. She had episodes of paroxysmal auricular tachycardia for the previous ten months not prevented by medications. No clinical evidence of organic heart disease was found. Rheumatoid arthritis and diabetes mellitus were present. Gall stones were found on x-ray and because of the probable precipitation of the attacks of tachycardia through a trigger mechanism by the gall bladder, cholecystectomy was performed. No further attacks have occurred.

*Case II. Paroxysmal Auricular Fibrillation.*—Mrs. C., a 66 year old lady, was admitted on 4 April 1945, and discharged on 19 April 1945. She had palpitation due to frequent ectopic beats and episodes of paroxysmal auricular fibrillation not controlled by quinidine or digitalis. Anginal pain occurred with the auricular fibrillation but no other evidence of organic heart disease was found. Blood pressure was 130/85. Cholelithiasis was found by x-ray and cholecystectomy was performed on 8 April, 1945. No further attacks of auricular fibrillation have occurred.

*Case III. Patient with EKG Abnormalities Which Were Exaggerated Post-Operatively but Returned to Normal Later.*—Mrs. M. G., a 53 year old lady, was admitted to the hospital on 1 November 1948. She had four attacks of epigastric cramping pain radiating to the precordium. Nausea, vomiting, and palpitation were associated. No jaundice had occurred.

Physical examination revealed normal heart, blood pressure, and chest. Tenderness was found in the right upper quadrant of the abdomen. Icterus index was 12. Hemogram was normal. EKG taken before cholecystectomy showed T-wave changes indicative of myocardial ischemia.

Cholecystectomy was performed on 4 November 1948. An EKG taken on 6 November 1948, showed further changes, but in one taken 10 November 1948, the T-waves had become upright. The last EKG taken three years later was entirely normal.

She has had no symptoms since referable to the heart or to the gall bladder.

*Case IV. Chest Pain Simulating Angina Pectoris Relieved Following Cholecystectomy.*—Mrs. H. K., a 29 year old obese lady, was admitted 17 July 1950, and discharged 31 July 1950. She gave a history of pain in the left anterior chest radiating to the left arm of four years duration. The pain was precipitated by exertion and often relieved by rest or nitroglycerine. It was more apt to occur after meals. Bradycardia was noted during the attacks. No jaundice had been present.

Physical examination revealed obesity, normal blood pressure, and normal heart. EKG was normal. Cholelithiasis was found on x-ray.

Cholecystectomy was performed on 24 July 1950. Convalescence was uneventful and no pain has been present since.

*Case V. Patient with Coronary Disease and Gall Bladder Disease. Pain Relieved after Cholecystectomy.*—Mr. H. M. S., a 72 year old white male, was admitted 14 April 1950, and discharged 7 May 1950. He had an antero-septal infarction in December, 1947, and during the next four years had chest pain suggestive of angina. Following a severe such attack, jaundice occurred. The gall bladder x-ray showed no excretion of the dye.

Cholecystectomy was performed on 15 April 1950; chronic cholecystitis and cholelithiasis were found. Convalescence was complicated by prostatic obstruction, requiring retropubic prostatectomy on 26 April

1950. Further convalescence was uneventful and he has had no anginal pain since.

*Case 17.* Patient with Myocardial Infarction with Symptoms Simulating Gall Bladder Disease.—Mr. S. C. H., a 54 year old white male, was admitted 30 October 1952, and discharged 28 November 1952. He had gaseous eructations after meals for three to four years, and on the morning of admission developed epigastric pain radiating to the right upper quadrant and to the substernal area.

Physical examination revealed epigastric tenderness and tenderness in both upper quadrants of the abdomen. The heart and blood pressure were normal. An EKG was normal. WBC was normal on admission and 12,000 two days later. Gall bladder x-ray was normal. Three days after admission changes developed in the EKG indicative of myocardial infarction. He was given anticoagulants and made an uneventful convalescence.

It is known that there is an increased hazard to the patient with coronary artery disease when he undergoes surgery,<sup>34</sup> and before advising a patient to have cholecystectomy one must consider carefully the risk involved and weigh this against the probable benefits to be derived from the procedure. Hannigan, *et al.*, have reported the mortality following major surgery in 58 patients who had myocardial infarction in the past to be 5.3%.<sup>35</sup> Other reports indicate a mortality of 6.8%<sup>36</sup> to 14.3%<sup>37</sup> in patients with angina pectoris undergoing surgery. Morrison<sup>37</sup> reports an 8.3% mortality of 24 patients with arteriosclerotic heart disease undergoing biliary tract surgery as compared with a general mortality of 2.6% of 1,931 patients.

We have recently reviewed the records of 107 men and 100 women who had cholecystectomy. Of the men, 10 (or 9.3%) died postoperatively. None of the women died. There were 38 men with heart disease, three of whom died as a result of this, and three died as a result of non-cardiac conditions. One must, therefore, consider that a patient with coronary disease, and particularly if that patient is a man, incurs a mortality risk of between 5% and 10% when undergoing cholecystectomy.

It is difficult to determine in a given patient what effect a diseased gall bladder has on the heart, but it would appear that in many patients with symptoms and signs of cholecystitis associated with those of coronary disease or of arrhythmia, the risk of cholecystectomy is justified because of the likelihood that the

gall bladder is a trigger mechanism which potentiates the symptoms of coronary disease or of arrhythmia.

#### In summary:

1. A brief review of the literature indicates that an association between gall bladder disease and heart disease is present.
2. Evidence is cited in support of the view that the gall bladder may initiate afferent reflexes which may bring about electrocardiographic changes, arrhythmias, and chest pain resembling angina.
3. It was pointed out that the differential diagnosis between gall bladder disease and coronary disease may at times be difficult, because of overlapping pain impulses in the spinal cord.
4. Examples are given illustrating the association between the gall bladder and the heart.
5. The mortality of cholecystectomy in patients with heart disease is discussed.

#### BIBLIOGRAPHY

1. Osler, William: Practice of Medicine, Third Edition, D. Appleton & Co., New York, 1898.
2. MacKenzie, J.: Angina Pectoris, H. Frowde, London, 1923.
3. Babcock, Robert H.: Chronic Cholecystitis As a Cause of Myocardial Incompetence, *J.A.M.A.*, **52**: 1904, 1909.
4. Tennant, Robert, and Zimmerman, Harry: Association Between Disease in the Gall Bladder and in the Heart as Evidenced at Autopsy, *Yale J. of Biol. & Med.*, **3**: 495, 1931.
5. Miller, Charles H.: The Gall Bladder and Cardiac Pain, *The Lancet*, **222**: 767, 1932.
6. Schwartz, Morris, and Herman, Albert: The Association of Cholecystitis with Cardiac Affections: A Study Based on 109 Cases, *Ann. Int. Med.*, **4**: 783, 1931.
7. Bean, Wm. Bennett: Infarction of the Heart: A Morphological and Clinical Appraisal of 300 Cases; Part I, Predisposing and Precipitating Conditions, *Am. Heart J.*, **14**: 684, 1937.
8. Breyfogle, Herbert S.: The Frequency of Coexisting Gall Bladder Disease and Coronary Artery Disease, *J.A.M.A.*, **114**: 1434, 1940.
9. Walsh, Bernard J., Bland, Edward F., Taquini, Alberto C., and White, Paul D.: The Association of Gall Bladder Disease and of Peptic Ulcer with Coronary Disease: A Postmortem Study, *Am. Heart J.*, **21**: 689, 1941.
10. Garrett, Richard M.: Cholelithiasis and Cardiac Disease, *Am. Surgeon*, **19**: 503, 1953.
11. Unpublished observations.
12. Barker, Paul S., Wilson, Frank N., and Coller, Frederick A.: Abdominal Disease Simulating Coronary Occlusion, *Am. J. Med. Sci.*, **188**: 219, 1934.



13. Roberts, Stewart: The Diagnostic Relations Between the Gall Bladder and the Heart, *Illinois Med. J.*, **56**: 317, 1929.
14. Wakefield, Howard: The Association of Gall Bladder Disease with Heart Disease, Clinical and Experimental Observations, *Med. Clinics of N. Am.*, **31**: 161, 1947.
15. Ravdin, I. S., Royster, H. P., and Sanders, George B.: Reflexes Originating in the Common Duct Giving Rise to Pain Simulating Angina Pectoris, *Ann. Surgery*, **115**: 1055, 1942.
16. Fitz-Hugh, Thomas, Jr., and Wolferth, Charles C.: Cardiac Improvement Following Gall Bladder Surgery, *Ann. Surgery*, **101**: 478, 1935.
17. Weiss, Morris M., and Hamilton, Joseph E.: The Effect of Gall Bladder Disease on the Electrocardiogram, *Surgery*, **6**: 893, 1939.
18. Clarke, Norman E.: Electrocardiographic Changes in Active Duodenal and Gall Bladder Disease, *Am. Heart J.*, **29**: 628, 1945.
19. Breitwieser, E. Ruth: Electrocardiographic Observations in Chronic Cholecystitis Before and After Surgery, *Am. J. Med. Sci.*, **213**: 598, 1947.
20. McArthur, Selem W., and Wakefield, Howard: Observations on the Human Electrocardiogram During Experimental Distention of the Gall Bladder, *J. of Lab. and Clin. Med.*, **30**: 349, 1945.
21. Hodge, G. B., and Messer, A. L.: The Electrocardiogram in Biliary Tract Disease and During Experimental Biliary Distention: Clinical Observations on 26 Patients, *Surgery, Gyn., and Obst.*, **86**: 617, 1948.
22. Straus, David, and Hamburger, Walter W.: The Significance of Cardiac Irregularities in Reference to the Operability of Cases of Cholelithiasis, Cholecystitis, and Duodenal Ulcer, *J.A.M.A.*, **72**: 706, 1924.
23. Crittenden, P. J., and Ivy, A. C.: A Study of Viscero-cardiac Reflexes, *Am. Heart J.*, **8**: 507, 1933.
24. Weiss, Soma, and Ferris, E. B., Jr.: Adams-Stokes Syndrome with Transient Complete Heart Block of Vagovagal Origin, *Arch. Int. Med.* **54**: 931, 1934.
25. Manning, G. W., McEachern, C. G., and Hall, G. E.: Reflex Coronary Artery Spasm Following Sudden Occlusion of Other Coronary Branches, *Arch. Int. Med.*, **64**: 661, 1939.
26. Gilbert, N. C., Fenn, C. K., and LeRoy, G. V.: The Effect of Distention of Abdominal Viscera on the Coronary Blood Flow and Angina Pectoris, *J.A.M.A.*, **115**: 1962, 1940.
27. Morrison, Lester M., and Swalm, William: Role of the Gastro-Intestinal Tract in the Production of Cardiac Symptoms, *J.A.M.A.*, **114**: 217, 1940.
28. Gilbert, N. C.: Influence of Extrinsic Factors on the Coronary Flow and Clinical Course of Heart Disease, *Bull. N. Y. Acad. of Med.*, **18**: 83, 1942.
29. Levy, Hyman, and Boas, Ernst: Angina Pectoris and the Syndrome of Peptic Ulcer, *Arch. Int. Med.*, **71**: 301, 1943.
30. Smith, Brian Hall: The Nature and Treatment of the Celiac-Plexus Reflex in Man, *The Lancet*, **2**: 223, 1953.
31. Crandell, D. LeRoy, and Artusio, Joseph F.: Cardiovascular Reflex During Intrathoracic Surgery, Anesthesia and Analgesia, **32**: 227, 1953.
32. Ettinger, G. H., Hall, G. E., and Banting, F. G.: Effect of Repeated and Prolonged Stimulation of the Vagus Nerve in the Dog, *Canadian Med. Assoc. J.*, **35**: 27, 1936.
33. Miller, H. R.: The Interrelationship of Disease of the Coronary Arteries and Gall Bladder, *Am. Heart J.*, **24**: 579, 1942.
34. Ernstene, A. Carlton: The Management of Cardiac Patients in Relation to Surgery, *Circulation*, **4**: 430, 1951.
35. Hannigan, Charles, Wroblewski, Felix, Lewis, William H., Jr., and LaDue, John S.: Major Surgery in Patients with Healed Myocardial Infarction, *Am. J. Med. Sci.*, **222**: 628, 1951.
36. Lingren, Inga, and Olivecrona, Herbert: Surgical Treatment of Angina Pectoris, *J. Neurosurgery*, **4**: 19, 1947.
37. White, James C., Smithwick, Reginald H., and Simeone, Fiorindo: The Autonomic Nervous System, The MacMillan Co., New York, 1952.
38. Morrison, Donald R.: The Risk of Surgery in Heart Disease, *Surgery*, **23**: 561, 1948.

## FAT EMBOLISM\*

H. ROWLAND PEARSALL, M.D.,  
and  
EDGAR N. WEAVER, M.D.,  
Roanoke, Virginia

The clinical entity diagnosed as fat embolism is still a subject of controversy. The pathological physiology involved has not been clearly determined and there may be some doubt that the condition as such exists. In most cases, the seriousness of the initial illness is far overshadowed by the alarming events that develop when the patient's course seems satisfactory. Most of the earlier work between 1820 and 1880 was done by German investigators. These included Magendie, Virchow, Weber, and Scriba. Warthin<sup>1</sup> in 1913 wrote the classic monograph on fat embolism and little has been added since that time.

In the earlier work it was thought that fat embolism occurred only after trauma to bone or adipose tissue, and typically after fracture of the femur or tibia. However, this phenomenon has been reported in a variety of conditions: all types of bone injury; surgical operations; acute periosteitis and acute osteomyelitis; injuries involving crushing, inflammation, or necrosis of adipose tissue; rupture of the liver; childbirth; eclampsia; tetanus; delirium tremens; convulsive disorders; extensive burns; lipemia due to poisons such as KC104, P, CO; lipemia due to diabetes, pancreatitis, nephrosis, alcohol, and acute febrile diseases; after ether, chloroform and cyclopropane anesthesia; and after I.V. ether administered therapeutically.

The following two patients have been seen in the past year and illustrate the important features of fat embolism.

*Case 1.* This twenty-four year old construction worker, P. H., received a transverse fracture of the left tibia and fibula when the side of a ditch in which he was working caved in. He received no other injuries. He was transferred by automobile to a hospital in a nearby town where a cast was applied to the leg shortly after admission. He was bright and cheerful when his family visited him that night, and ate the usual hospital evening meal.

\*Aided in part by the Division of Alcohol Studies and Rehabilitation, State Health Department, Richmond, Virginia.

Read before the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953.

When last checked by the floor nurse at 11 P.M., his condition was satisfactory. He received morphine for pain on one occasion during the early part of the night, but nothing after that.

At 7 A.M. the next day, the floor nurse found him in a comatose condition, and it was noted that he had twitching of his lips and rigidity of the upper extremities and left leg. His blood pressure at that time was 104/64. During the next two hours, his blood pressure dropped to 90/70, and his condition became worse. He was transferred to a hospital here in Roanoke, and on admission to the hospital, he was deeply comatose, cyanotic, and in severe respiratory distress. He appeared to be in shock, but his blood pressure was not at shock level. Within the next three hours, his temperature became elevated to 103 degrees, and his blood pressure was checked at 104/64. Neurological examination revealed hyperactive reflexes of both upper extremities, and the right lower extremity, but because of the cast, the reflexes in the left lower extremity could not be tested. There was absent abdominal cremasteric reflexes. There was rolling of the eyes from side to side. There were no cranial nerve findings, and no pathological reflexes. Skull x-rays taken shortly after admission showed no abnormal findings. Lumbar puncture revealed clear fluid with a pressure of 180 mm. of water and normal cell count and protein.

Laboratory studies were as follows: Hemoglobin 17 grams; RBC 5,960,000; WBC 22,600 with a shift to the left; hematocrit 45; urine showed 2 plus albumin. The blood urea, blood sugar, and CO<sub>2</sub> were within normal limits. A few fat particles were found in the urine but none in the sputum or plasma.

Shortly after admission, his condition became critical, and in spite of normal spinal fluid pressure, the possibility of an intracranial hemorrhage was considered. He was taken to the operating room and bilateral frontal burr openings were made, and a ventriculogram done which revealed no abnormalities in the ventricular system. The pulmonary secretions became thick and tenacious, necessitating a tracheotomy. On the morning after admission, he

was still comatose and was found to have a fine petechial rash over his abdomen and shoulders. During the next several weeks, the patient's course was very stormy and his temperature ranged from 103 to 104 degrees. He was treated with antibiotics, oxygen, and supportive therapy. During the third week, he began to respond, and gradually improved so that at the end of two months he was able to feed himself and say a few words, although he had considerable mental impairment. Subsequent examinations have revealed that he is slowly but progressively improving mentally.

*Case 2.* This twenty year old white male, H. H., received a compound comminuted fracture of the right femur in an automobile accident about midnight and was carried to a nearby hospital. He was put in temporary traction, and when his mother left him at 1:30 A.M., he was laughing and talking and had no complaints except slight pain in his leg. It was learned that after eating his evening meal, he had gone riding with friends, and had been drinking heavily at the time of the accident. On the morning after admission, he was found unconscious in bed and was referred to a hospital in Roanoke.

On arrival, the patient was semi-comatose and responded only to painful stimuli. He was in respiratory distress, and there were coarse bubbling rales throughout both lungs. His blood pressure was 116/88. His temperature was 102.6. There was a small abrasion in the right temporal region, and definite left facial weakness, as well as weakness and increased reflexes in the left arm, and slightly increased reflexes in the left leg. There were no pupillary changes.

On admission, his laboratory studies were as follows: Hemoglobin 13.5 gms.; RBC 4,500,000; WBC 14,300 with a normal differential; total eosinophil count was 0. His catheterized urine showed a 3 plus albumin. No fat particles could be found in the plasma, sputum, or urine.

It was felt that this patient might possibly have an intracranial hemorrhage, and bilateral burr openings were made, but no evidence of a hemorrhage was found, and his ventricular fluid was clear. The brain was not tense and no ventriculograms were made. Because of extreme respiratory distress, a tracheotomy was done after the burr holes were made.

Shortly after the patient was returned from the operating room, his blood pressure dropped to 98/64, but gradually rose to normal level over a period of

twenty-five minutes. On the morning following operation, he was found to have a fine petechial rash over his chest and abdomen with a few scattered spots on his extremities. See Fig. 1. His respirations had improved, although he remained comatose. Approximately a week after he was admitted to the hospital, his mental symptoms began to clear, and his temperature, which had been elevated during the previous week, began gradually to return to normal. On the seventeenth hospital day, he was taken to the operating room and an intramedullary bar inserted into the right femur without complications. He was discharged from the hospital on 5/31/53, and was alert but mentally sluggish. He has been seen for follow-up visits since his discharge, and as far as can be determined, has returned to his normal mentality and has no neurological sequelae.

#### INCIDENCE

In routine autopsies some degree of fat embolism has been found to occur frequently in cases of traumatic injury, especially with bone fracture<sup>2</sup>. However, the mortality due directly to fat embolism is small and unpredictable. Males predominate in the ratio of 8:1 and then most often in the fourth decade. It is rarely seen in children. Alcoholics are more subject to fat embolism than non-alcoholics. Warthin found fatty embolism responsible for about 2% of deaths in 560 routine autopsies. Most authors agree that traumatic fat embolism occurs more commonly than is generally known and many fatal cases have been diagnosed as shock, coma, apoplexy, alcoholism, brain hemorrhage, pulmonary embolus, and coronary thrombosis.

#### CLINICAL PICTURE OF FAT EMBOLISM

The diagnosis is dependent on the awareness of its possible existence in a given patient. The most important feature of traumatic fat embolism is the "free interval" following injury during which the patient's condition is satisfactory. This latent period is usually a few hours, but has varied from 30 minutes to 9 days<sup>1</sup>.

Without warning, pulmonary and/or cerebral symptoms appear and the patient's condition quickly becomes critical. Pulmonary symptoms consist of dyspnea, cough, cyanosis, frothy or bloody sputum. Pulmonary edema and bronchopneumonia are frequent, and cor pulmonale may develop. Cerebral symptoms include insomnia, irritability, disorientation, coma, convulsions, rigidity, and occasionally lo-



calizing cranial nerve signs. Cerebral damage may last for weeks and may be permanent.

Elevation of temperature occurs promptly and may be extreme. This usually subsides after several days. Within 24-48 hours a fine petechial or even hemorrhagic rash may be found chiefly on the abdomen, chest, and shoulders if carefully searched for. This rash is easily overlooked and usually disappears in 2-3 days. The fundi may show emboli



Fig. 1. Petechial Skin Rash, Case 2.

in the retinal vessels<sup>3</sup>, and hemorrhages and exudates may be seen at times. It is characteristic in traumatic cases that the degree of embolism is far greater than one would expect from the extent of the injury<sup>1</sup>.

Both of the cases presented were admitted to the hospital in a comatose state with fever. There were signs of marked pulmonary embarrassment with large amounts of frothy secretions necessitating tracheotomy. The respiratory distress was markedly relieved by repeated adequate suctioning through the tracheotomy tube. Both patients had findings which suggested possible intracranial hemorrhage. Spinal fluid examination and burr hole explorations were done in each case and proved negative. In addition, on the morning after admission a fine petechial rash was observed on the abdomen, chest and shoulders. The first patient developed mild shock several hours after the onset of coma, and the second had only a transient drop in blood pressure at the time of operation. The "free interval" in *Case 1* was about 12-15 hours, and about 4-5 hours in *Case 2*. The latter patient had been drinking heavily at the time of the accident. The first patient ate the usual hospital evening meal, and the second had eaten a meal high in fat about 5-6 hours

before the accident. Both were healthy, vigorous young men without history of previous serious illness.

#### LABORATORY FINDINGS

A survey of the literature as to laboratory tests diagnostic of this condition makes it evident that there is at present no satisfactory definitive test for fat embolism. The diagnosis must be made primarily from the clinical picture and in fatal cases confirmed by post mortem examination.

When present, fat in the sputum and urine are helpful suggestive findings. However, Du Toit<sup>2</sup> and others point out that fat appears in the sputum late and may be positive in other diseases. Warren<sup>4</sup> feels that lipuria is not of much value and seldom develops before the fourth day. The urine must be obtained by catheter without the use of lubricants and as the fat floats to the top of the bladder, care must be taken to empty it completely. Microscopic examination and the "sizzle" test are usually satisfactory.

Blood fat estimation and examination of the serum for fat have been of little value. An explanation for this could be that by the time fat embolism is suspected in most cases the fat particles have been strained out and the damage done. It is also conceivable that the fat may go back in solution easily. In neither of the cases presented in this paper was the serum cloudy. However, considerable time had elapsed before the examination was made. A few fat particles were found in the urine of the first case.

Many authors emphasize the importance of unexplained anemia in suspicious cases. This is not a constant finding and is probably due to blood loss into the tissues or to hemolysis. Schneider<sup>3</sup> feels that fat droplets in the blood have little value *per se* as the size of the globules is of much more importance than the total number or the quantity of blood fat.

Whitson<sup>5</sup> states there is no pathognomonic laboratory finding in fat embolism. The spinal fluid is usually clear and chest x-rays may show densities, suggesting bronchopneumonia.

#### DIFFERENTIAL DIAGNOSIS

Widespread bronchopneumonia, pulmonary edema due to intrinsic heart disease, and pulmonary embolus from blood clot formation may simulate the findings of fat embolism and at times cannot be completely excluded until the entire clinical picture of the condition has developed. Septicemia due to any

cause and bacterial endocarditis can usually be ruled out by proper laboratory study and clinical observation. Midbrain injury, concussion, and epidural or subdural clot have to be considered in all cases, especially following trauma. If coma and localizing neurological signs develop, burr openings and ventriculography may be necessary to rule out a surgically correctible lesion.

Undetected diabetes, poisoning, hypoglycemia, and uremia can cause coma but are easily diagnosed when thought of. Delirium tremens is always a possibility in chronic alcoholics but it should be remembered that fat embolism occurs more frequently after the intake of alcohol.

If unexplained neurological and pulmonary symptoms develop at child birth or during or immediately following operation, the possibility that fatty emboli are responsible should be considered. It is logical to assume that fat embolism is more likely to occur in patients with lipemia due to any cause.

Delayed shock, if progressive and fatal, can cause almost all of the findings seen in fat embolism<sup>5</sup>. However, as borne out by the above two cases and by numerous other reports, shock is not always present and, when it does occur, is a late finding.

#### PATHOLOGICAL PICTURE

According to Warthin<sup>1</sup>, Du Toit<sup>2</sup>, Warren<sup>4</sup> and others, *the lungs and the brain are the sites of the primary damage in fat embolism*. Injury to other organs can occur but rarely causes symptoms. The lungs are heavy and large and the cut surface shows a marbled appearance with zones of hemorrhage alternating with emphysema. A frothy blood stained exudate is present and may appear fatty on close examination. Bronchopneumonia is found after the first 48 hours. *On microscopy fat globules can be seen blocking the capillaries* and at times appear in the alveoli. The lung structure shows congestion, edema and emphysema. In severe cases the pulmonary artery may be almost completely filled with fat particles. If the pulmonary involvement is extensive, the right side of the heart is usually dilated. Occasionally actual bits of bone marrow have been found in the pulmonary artery.

The brain shows hyperemia of the meninges and cortical vessels. The gray matter may show little involvement, while the white matter will show petechial hemorrhages. Areas of softening may occur, particularly in the brain stem. The capillaries con-

tain fat emboli and the choroid plexus frequently shows widespread damage. There is perivascular myelin degeneration and usually little neurological reaction.

Fatty emboli may be found in any of the capillaries of the body and there may be congestion as seen in the kidney or actual petechial hemorrhage as seen in the skin. There may be an increase in liquid fat at the site of the injury.

In the pathological technique used it is important that fresh material be stained with sudan III, osmic acid or other fat stain after frozen section. The material is mounted in glycerine-gelatin or formol.<sup>1</sup>

#### PROGNOSIS

There is no unanimity of opinion as to the prognosis in a given case. Death is rare after the first four days. *The cerebral damage, if severe, may take months for recovery and even then may not be complete.*

#### TREATMENT

There has been no satisfactory treatment of fat embolism once it has occurred. The immediate use of oxygen and measures to prevent the development of shock can be expected to reduce the amount of damage to the lungs and brain. If pulmonary secretions cannot be easily controlled by the usual oral or nasal route of suctioning, then tracheotomy may be life saving. Antibiotics should be begun at once to prevent the development of serious pneumonia. Good nursing care is imperative.

#### DISCUSSION

It is apparent from a review of the literature that the basic cause of fat embolism has not been definitely established and needs further investigation. The theory proposed is that fat emboli gain entrance to the venous system at the site of injury of bone marrow or adipose tissue. The fat particles are washed through the hematoma into the ends of veins opened by trauma and thence pass to the lungs. Some of the fat is squeezed through the lung capillaries and passes to the arterial circulation. Warthin,<sup>1</sup> in his classic review of the subject, had little doubt that the source of the fat was the injured tissue and most authors still accept this view. Several serious inconsistencies have been observed, however, in the cases reported through the years. The most important of these is the occurrence of the condition in other diseases. Then, too, some patients have only cerebral symptoms and, as Whitson<sup>5</sup> points out, it

is difficult to see why emboli passing through one capillary bed will cause blockage in another. Warthin<sup>1</sup> first noted that the total amount of fat liberated may at times be unbelievable, and may be far out of proportion to the liquid fat known to be contained in an injured long bone. The femur in man has been shown to contain approximately 65 cc. of liquid fat, and Lehman and Moore<sup>6</sup> have demonstrated that even in dogs 100-120 cc. of liquid fat must be injected rapidly in order to produce a lethal outcome using cottonseed oil. It is illogical to assume that the entire amount of fat in a traumatized bone in man can drain into the venous system and that even if this did occur that the process could be rapid enough to overwhelm the body defense mechanisms.

The small bits of marrow occasionally found in the pulmonary artery and its branches after bone trauma are insufficient to cause serious symptoms and represent an incidental finding for the most part. These undoubtedly break off and enter the venous channels in the bone before thrombosis occurs.

As Wrist and Johnson<sup>7</sup> have written, a careful study of healing fracture areas and other wounds fails to demonstrate fat embolism taking place. On the contrary, Whitson<sup>5</sup> feels that with injury, tissue tension collapses the veins and thrombosis quickly occurs. Even the vessels in bone channels show thrombosis shortly after injury, although the scant areolar tissue collapses at a slower rate. Some liquid fat could enter the venous system at this time, however, this portal of entrance is sealed off long before the "free interval" seen in most cases of traumatic fat embolism has passed. The idea that negative pressure in the veins "sucks" fat from the bone marrow is untenable. Du Toit<sup>2</sup> thinks there is no real evidence that the lymphatics play a significant role as portals of entry of the fat.

Lehman<sup>6</sup> and others have stated that blood chemistry alteration is important in the development of fat embolism; however, Scuderi<sup>8</sup> concludes that there is no convincing evidence that the composition of blood including fat is significantly altered following fracture.

Whitson<sup>5</sup> states that a reduction in the oxygen carrying capacity of the blood is the primary factor in the production of fatty degeneration and other changes ascribed to fat embolism. He points out that anoxemia and shock will produce identical changes in the tissues as does embolism. He does not account for the fact that in most cases shock,

if present, occurs late in the illness. He concludes that intravascular fat is the result rather than the cause of capillary stagnation. This is an interesting viewpoint, but does not fit the facts any better than most other theories about fat embolism.

As seen in the cases here reported, the signs and symptoms of fat embolism were present several hours before there was any evidence of shock, and even then was not severe in either case.

The extreme changes described by Whitson<sup>5</sup> and others are seen in terminal shock, and it is not unreasonable to expect the tissue changes to be similar, as anoxemia is present in both, but from a different cause. There is certainly no real evidence that impending, undiagnosed or mild shock can produce all the changes seen in fat embolism. If Whitson<sup>5</sup> were correct, it is difficult to see why the clinical picture of fat embolism is not present in all cases of severe shock. Prolonged anoxemia and shock due to any cause can result in the "vegetable" patient, but the clinical picture is not that of fat embolism. Then, too, many careful and reliable observers have reported massive amounts of fat in the vessels and this cannot be explained by fatty degeneration. There can be no doubt that fat embolism has been produced experimentally by the injection of liquid fat into animals even though the way embolism occurs clinically is still not clear.

*If the fat does not come from injured bone marrow or adipose tissue, then it must come in some way from the blood itself.* There are now numerous papers in the literature relating to the behavior of lipid material in the blood which are pertinent to the problem. Lehman<sup>6</sup>, Du Toit<sup>2</sup>, and others have considered the possibility that the blood might serve as a source of the emboli, but reached no definite conclusion about the matter. Lichenstein<sup>9</sup> also has speculated that emulsified fat in the sera or possibly the lipid in the red cell envelope might be the origin of the fat. Lehman and Moore<sup>6</sup> have already suggested that this phenomenon may be due to fat normally in the blood aggregating into larger particles as a result of certain physical and chemical changes in the blood. As already noted, however, there are no consistent changes and there is no correlation to blood volume, hematocrit, anemia, etc.<sup>10</sup>

*Normally, about three-fourths of the fat in the blood is in solution* and is attached the beta lipoprotein<sup>11</sup>. Physiologic hyperlipemia is seen after the ingestion of fats with a peak in the fat tolerance



curve occurring about 3 hours after the ingestion of the meal. The turbidity seen in hyperlipemia is due primarily to an increase in neutral fat. When the cholesterol or phospholipides are elevated, the serum is clear. In essential hyperlipemia, anoxia, nephrosis, poisoning due to  $\text{CHCl}_3$ , chloroform, etc., an increased turbidity in the plasma has been observed<sup>12</sup>. Ahrens and Kunkle<sup>13</sup> point out the importance of the stabilizing effect of the phospholipids on the serum lipids. In the condition of essential hyperlipemia, Joyner<sup>12</sup> and others have found the phospholipids to be low. Boyd<sup>14</sup> has concluded that the phospholipids tend to maintain the other fat fractions in a supersaturated state in the serum and, when the phospholipid content of the serum diminishes, the lipids come out of solution as chylomicrons, forming a milky emulsion. According to Holden<sup>15</sup> the normal serum neutral fat is 0-150 mgm.%. Visible cloudiness usually occurs at about 300 mgm.%. The initial rise in neutral fat is detectable about 1 hour after eating and returns to normal levels in 4-6 hours.

Harman and Ragaz<sup>10</sup> have published a careful study on the pathogenesis of fat embolism. These authors point out that the response of the host in fat embolism is variable and that the condition of the patient or experimental animal is as important as the action of the fat on the host. They found that fat particles above 8 microns in diameter may cause embolism, whereas smaller particles cause no difficulty. Homologous liquid fat was injected into rabbits and it was found that approximately 1.0 cc./kg. would cause 100% mortality in the animals. In another experiment these investigators found if the animals were traumatized 7 hours prior to the injection that 0.45 cc./kg. of fat caused the mortality to increase from 16.6% to 50%. Dehydration and hemoconcentration had no significant effect on the experiment. They found, if oxygen was administered, that the 50% mortality dropped to zero, although some tissue changes could not be prevented. The initial result depended mainly on the quantity of fat injected, whereas the subsequent course of the animals depended on the action of the fat upon the tissues. Fat does not affect the tissues in an indiscriminate way such as would be the case if there was a generalized chemical reaction. This action must be decided by factors independent of the nature of the fat itself.

Scuderi<sup>8</sup> and others have shown that hydrolyzed

fat is much more toxic than neutral fat from which it is derived. It produces an intense exudate in the lungs of the experimental animal. Warren<sup>4</sup>, however, was able to demonstrate neutral fat in a few of his 100 cases. He found that oleic acid is 7 times as lethal as neutral bone marrow fat. It was suggested that the pathologic changes in fat embolism are probably in part due to the action of free fatty acids and soaps liberated by the action of tissue lipase as well as to mechanical plugging. Gomori<sup>16</sup> and others have demonstrated that lung tissue is high in this enzyme. This may well be a factor in cases of associated pancreatitis with fat embolism.

Harman and Ragaz<sup>10</sup> further show that no morphologic alteration in lung tissue is found when massive pulmonary vessel plugging occurs following paraffin injection where no fatty acids are formed.

Robinson<sup>17</sup> feels that fat is removed from the circulation by four mechanisms: excretion through the kidneys, excretion through the liver, reticuloendothelial system, and blood and tissue lipase. The real problem, however, is how the fat leaves the blood stream. Interesting experimental work along this line has recently been reported by Swank<sup>18</sup>. He found that normally there is a physiological clustering of fat chylomicrons in the blood after a fatty meal. Maximum clustering occurred at about 8-10 hours and was greater with larger amounts of oral fat. These larger fat particles are then presumably strained out of the circulating blood by capillaries and reticuloendothelial cells. He feels that this suggests a possible mechanism for multiple capillary embolization and, if sufficiently numerous in any one area, that disseminated lesions, both functional and pathological, could result. It was further observed that the tendency to cluster varied in different individuals. It was noted that a high fat diet and pregnancy increased the tendency for clustering. This is interesting in view of the cases of fat embolism that have been reported in pregnancy. I.V. heparin has been found to promote clustering<sup>19</sup> as well as histamine.

Marder *et al*<sup>20</sup> recently have shown that by chylomicron counts and nephelometric determinations on serum examined after ingestion of a fatty meal there is slower absorption of fat in the aged than in young people. Ingle<sup>21</sup> has shown that adrenal cortical hormones promote the absorption of fat from the intestines.

The role of fat solvents in fat embolism must be

considered. It is known that *alcoholics are more prone to fat embolism than non-alcoholics* and also this condition has occurred following i.v. ether therapeutically as well as following ether and cyclopropane anesthesia. Du Toit<sup>2</sup> suggests that the fat emulsion in the serum is less stable in alcoholics and postulates that this is due to frequent dilution with alcohol which is a fat solvent. In the case of fatal fat embolism following i.v. ether administration<sup>9</sup> the patient was allowed to eat his noon meal about 2 hours before the ether drip was started. It seems probable that fat solvents may in some way make the fat unstable; however, a better explanation for the role of fat solvents in fat embolism would be that more fat remains in solution than normally as the physiological removal by clustering might be delayed until the effects of the solvent have worn off. At this point, massive clustering could occur and initiate serious embolism.

The possible role of ingested food in fat embolism has been neglected and may well be of extreme importance. In *Case 1* here reported the patient was allowed to eat his evening meal and it was several hours after this that embolism occurred. *Case 2* ate his evening meal and then drank before the accident which could favor the development of fatty emboli. In general, it may be stated that the majority of diseases in which fat embolism has been reported are conditions in which the patient would be most likely allowed to eat a fairly normal diet. This is particularly true in fractures. In most other surgical procedures, the patient is fasted some time before and after operation.

There would still appear to be some other factor which is primarily involved in the development of this phenomena. *When one considers the multiplicity of conditions and diseases during which fat embolism has occurred, the most striking thing that is common to all is pituitary adreno-cortical stimulation. In many cases, particularly following trauma, the "free interval" corresponds perfectly with maximal response of the adrenal cortex to ACTH.* Rich *et al*<sup>22</sup> have recently reported marked lipemia in dogs treated with cortisone. It has been recognized for some time that the adrenal cortex exerts an effect on fat metabolism, although the exact nature of the effect is not known. Price and Bloom<sup>23</sup> have shown that, in rabbits, prolonged cortisone treatment causes large quantities of serum lipoproteins of the SF 80-400 class to appear. This was converted serially to the lower SF

values when the cortisone was stopped. Aldersberg<sup>24</sup>, in studying hormonal control of the serum lipid partition in man, observed incidentally that the fasting sera of many of his experimental subjects given ACTH and cortisone was turbid or opaque due to lipemia. He speculated that this may indicate the production of less soluble lipid or a lipid of much larger particles than normal, or possibly the conjugation of the lipoprotein in an abnormal manner. He feels that the hormonal changes produced by cortisone and ACTH can easily upset the ratio between free and conjugated lipids, especially since a change in the globulin fractions has been found by electrophoretic determination.

The phospholipids have not been measured in cases of fat embolism, however, Rhon<sup>23</sup> reports a case of severe hyperlipemia in a pregnant woman who at delivery developed acute pancreatitis and in whom the phospholipids were low. In view of the relation of the phospholipids to the stability of the fat emulsion previously referred to, it would be interesting to do this determination in cases of fat embolism. It would also be interesting to study the effects of massive amounts of ACTH on the serum phospholipids at the time of maximal adrenal stimulation. Adlersberg's<sup>24</sup> results were inconclusive on this point, but his procedures were not planned with this in mind.

*The presence of alimentary lipemia at the peak of hormonal effects on the plasma lipids might well be the trigger mechanism for the production of fat embolism.* In addition, there are probably other unknown factors such as individual susceptibility and the plasma phospholipids which influence the stability of the fat emulsion.

#### PROPHYLAXIS

Everything possible should be done to prevent further injury in the handling of severely traumatized patients. If the possible role of alimentary lipemia in fat embolism can be established, it would seem logical to eliminate fat from the diet of patients during acute stress of any type in the first few days; this applies particularly to bone fracture. Fat solvent anesthetics should be used with caution in such patients.

#### SUMMARY

1. Fat embolism does exist as a clinical entity and still has to be diagnosed by the clinical picture.
2. Fat embolism occurs in a variety of conditions

but is seen typically after trauma, especially fracture of bone.

3. There is now considerable evidence that this condition in some way results from lipemia or dissociation of the plasma lipids with multiple capillary embolization, and is not due to liquid fat in the marrow draining into the venous system.

4. Several possible mechanisms operating in the production of fat embolism are suggested:

- a. Alimentary hyperlipemia.
- b. Normal physiological clustering of chylomicrons.
- c. Instability of fat emulsion in the plasma due to lowering of phospholipids or other unknown factors.
- d. Fat solvents, such as ether and alcohol, which enable the plasma to become supersaturated with fats.
- e. Hyperlipemia resulting from adrenal cortical stimulation by ACTH.

5. Individual susceptibility for the occurrence of this condition probably varies considerably.

6. Treatment is supportive. Oxygen therapy and prevention of shock are of extreme importance.

7. There is need for further basic research on this problem.

#### ADDENDUM

Dr. J. C. Forbes at the Medical College of Virginia has called our attention to a recent article by Fullerton (British Medical Journal: Aug. 1, 1953) concerning the relationship of alimentary lipemia to

blood coagulability. This may also be an important factor in the production of fat embolism.

#### BIBLIOGRAPHY

1. Warthin, A. S.: *Internat. Clin.*, Series 23, **3**: 71, 1913.
2. Du Toit, J.: *South African Med. J.*, **23**: 1062, 1949.
3. Schneider, R. C.: *J. Neurosurg.*, **9**: 1, 1952.
4. Warren, S.: *Am. J. Path.*, **22**: 69, 1946.
5. Whitson R. O.: *J. Bone and Joint Surg.*, **33 A**:447, 1951.
6. Lehman, E. P., and Moore, R. M.: *Arch. Surg.*, **14**: 62, 1927.
7. Wrist, R. M., and Johnson, R. W.: *J. Bone and Joint Surg.*, **25**: 375, 1943.
8. Scuderi, C. S.: *Arch. Surg.*, **36**: 614, 1938.
9. Lichenstein, L., and Sewall, S.: *J.A.M.A.*, **136**: 827, 1948.
10. Harman, J. W., and Ragaz, F. J.: *Am. J. Path.*, **26**: 551, 1950.
11. Oncley, J. L., Curd, F. R. N., and Melin, M.: *J. Am. Chem. Soc.*, **72**: 458, 1950.
12. Joyner, C. R.: *Ann. Int. Med.*, **38**: 759, 1953.
13. Ahrens, E. H., and Kunkel, H. G.: *J. Exper. Med.*, **90**: 409, 1949.
14. Boyd, E. M.: *Tr. Roy. Soc. Canada*, **31**: 11, 1937.
15. Holder, R. B.: *Bull. N. E. Med. Center*, **10**: 104, 1948.
16. Gomori, G.: *Arch. Path.*, **4**: 121, 1946.
17. Robinson, J. R.: *Am. J. Surg.*, **78**: 40, 1941.
18. Swank, R. L.: *Am. J. Physiol.*, **164**: 798, 1951.
19. Hahn, P. F.: *Science*, **09**: 19, 1943.
20. Marder, L., *et al.*: *Gastroenterology*, **20**: 43, 1952.
21. Ingle, D. J.: *J. Clin. Endo.*, **3**: 603, 1943.
22. Rich, A. R., Cockran, T. H., and McGoon, D. C.: *Bul. Johns Hop. Hosp.*, **88**: 101, 1951.
23. Price, F. T., Jr., and Bloom, B.: *Metabolism*, **1**: 163, 1952.
24. Adlersberg, D. J.: *Clin. Endo.*, **11**: 67, 1951.
25. Rohn, R. J., *et al.*: *Arch. Int. Med.*, **82**: 339, 1948.



## THE PSYCHOGENIC ETIOLOGY OF PEPTIC ULCER\*

R. W. GARNETT, JR., M.D.,

Department of Neurology and Psychiatry, University of Virginia,  
Charlottesville, Virginia

The title of this paper is not meant to imply that psychogenic factors are the sole cause of peptic ulcer or that all peptic ulcers are of psychogenic origin. It means that in this paper we will be discussing the role of these factors in the causation of most cases of ulcer and the psychodynamics and mechanisms by which this occurs according to widely held theories.

In psychosomatic medicine, which simply means good medicine, it is a basic premise that emotions affect the physiological functions of the body in very definite and tangible ways. This has been so thoroughly documented through the experiments and observations of many workers from Beaumont through Pavlov, Cannon and Wolff, and the personal and professional experiences of everyone in this conference as to leave no further room for argument. It is also generally agreed that disturbed intensified emotions lead to disturbance of function of many organs and systems of the body, particularly those under controls of the autonomic nervous system, and that prolonged or frequent disturbance of function leads as a rule to structural alteration of the tissues involved. We know something of the neurological and hormonal pathways through which this is effected and something of the altered physiology and pathology which results. Undoubtedly, there is more to learn all along the line.

Returning specifically to the natural history of peptic ulcer, we would outline its development as follows: Disturbed interpersonal relationships more or less consciously perceived in the cortex, transmitted through the thalamus to the hypo-thalamus and pituitary, then into the autonomic pathways, particularly, and more or less selectively in this case, to the vagus nerve, activation of which leads to hypermotility, hyperemia and hypersecretion of the stomach—a condition apparently conducive (if sufficiently prolonged, intense or frequently recurring), to ulceration of the mucosa. Certain other x-factors may also have to be present at the site of ulceration, such as an excess of lysozyme, in order to produce actual ulcer formation. On this much we can all probably agree, so we must push on to something more controversial.

In medical school text-books, it has long been customary to say that the typical ulcer patient had an asthenic body build, was an energetic, driving, ambitious, go-getter, and that the incidence was much higher in men than women, and during the third and fourth decades of life. The relevance of these clinical observations to the cause of ulcer was not clear, but thought to have something to do with nervous tense individuals being subject to dyspepsia, nervous indigestion, excessive acid output, hypermotility of the stomach and poor dietary habits, and that men from 20 to 40 worked harder and worried more. The empirical common-sense treatment was to encourage these individuals to slow down, take it easy, stop worrying, stop smoking or drinking, go on a diet of milk and cream at frequent intervals and preferably come into a hospital for rest and nursing care. This usually worked remarkably well, and still does, at least, temporarily. But some people are not content to let well enough alone and want to know WHY—which explains, I suppose, why a psychiatrist is on this panel—because the psychiatrists think they have come up with some answers into which everything fits very neatly.

It is also generally recognized that the real problem of ulcers is not the cure of the acute ulceration. It will heal under a good medical regime, or it can be very satisfactorily eliminated surgically. The real problem is the recurrence, or one might put it that the real problem is with the person who gets ulcers—and that is where psychiatry presumably comes in.

Two other clinical observations are pertinent before proceeding with speculation on what we like to call the dynamics. It has been noted that many ulcer patients experience a nocturnal rise in hydrochloric acid during sleep, which cannot be accounted for simply by absence of food or anti-acid intake. How does this happen during sleep when the person is at rest from the work, worry, etc., that are supposed to stimulate secretions?

It has also been observed that there are a fair number of exceptions to the classical picture of the ulcer case as a business tycoon or even the worrisome, overly conscientious clerk. Some are literally

\*Presented at the Conference on Gastro-Enterology, November 20, 1953, at Charlottesville, Virginia.

bums, ne'er-do-wells, irresponsible, markedly dependent types.

Psychiatrists proceed on the assumption in common with Gilbert and Sullivan that "things are seldom what they seem." It applies here in our theory of the dynamics of the ulcer case. We believe that the typical "ulcer personality," far from being really an aggressive, striving, ruthless, independent man, is actually passive, dependent, anxious, hungry for love, wanting to be taken care of like an infant, but he cannot accept this aspect of himself, reacts strongly against these wishes or needs, and overcompensates in the opposite direction; thus, appearing on the surface to be the type of person usually described. He literally deprives himself, starves himself of the very satisfactions he craves. In the case of the atypical type mentioned above who is overtly passive and dependent, he is usually deprived by external circumstances, unable rather than unwilling to gratify his receptive needs for love and dependency.

To quote from Dr. Alexander, who has, perhaps, contributed most to our modern conception of the psychodynamics of stomach ulcer:

"There are few vegetative functions which play such an important role in emotional life as does the ingestion of food. From early life on, eating is associated with the feeling of security, of receiving love and care, and also with greed, possessiveness and envy. The neurotic conflicts centering around these basic emotions may contribute to such things as disturbance of appetite as in bulimia and anorexia, of swallowing, as in cardiospasm, and nervous vomiting, and to dysfunctions of the digestive tract such as duodenal ulcer, constipation and diarrhea. What seems to be best established is that the accentuation and inhibition of the wish to receive love and protection being deeply associated from infantile experience on, with feeding, may activate or inhibit almost any phase of the incorporation and digestion of food. Those functions which are under autonomic innervation are activated or inhibited by emotional stimuli on the principle of the conditioned reflex. This is illustrated by the following sequence: the wish to be loved, to receive, to be taken care of, is associated on the psychological level with the wish to be fed and on the physiological level, with preparation for being fed, that is, increased gastric secretion, hyperemia and hypermotility."

Some workers in the field, particularly those with-

out psychoanalytic orientation are inclined to feel that too much stress is laid on the specific personality type and the specific conflict situation—the deprivation of passive receptive love. They feel and have some experimental and clinical evidence to indicate that the problem is simply one of anxiety to which some individuals are inclined to react with one organ and some another. In the case of ulcers, the patient is a predominantly stomach reactor. Others experience or express emotions more through the colon or the cardiovascular system, or the respiratory system or the skeletal musculature.

It is perhaps not too hard to visualize that the infant who is pacified by having a nipple, be it breast or bottle, stuck in his mouth no matter what the source of his discomfort may be, becomes conditioned psychologically and physiologically to expect to be fed whenever he is unhappy, and that residuals or equivalents of this conditioned reflex may be carried over into adult life. Other examples of this reaction pattern are: thumb-sucking, smoking, chewing, eating, drinking, when done to relieve anxiety or tension, to enhance an illusion of well-being, safety, comfort and love, reminiscent of infantile bliss at the mother's breast. The physiological processes associated with ingestion have become, in these individuals, associated with any state of discomfort or tension.

Wolff and Wolf at the New York Hospital, working with their subject who had a gastric fistula, noted by direct visual observation that, during states of fear or depression, a predominantly sympathetic stimulation occurred, resulting in hyposecretion, hypomotility, mucosal pallor and decreased mucin production. Emotions of resentment, anger and anxiety were associated with hypersecretion of acid and pepsin, hypermotility, hyperemia and increased mucin output—in other words, parasympathetic activity and also a state of preparedness for receiving food.

But, one may well say, everybody at one time or another experiences such emotions but they don't all get stomach ulcers. There is usually in ulcer patients other evidence of autonomic instability, such as excessive pallor, sweating, bradycardia, tachycardia, urinary frequency, spastic colitis, etc. It is not autonomic nervous system disturbance alone but the particular imbalance which occurs in the conflict situation that appears to favor development of ulceration. A so-called normal person under a similar situation might get only transient heartburn

but the character structure of the ulcer patient is such as to react with sufficient intensity and duration to cause actual ulceration.

The question of nocturnal hypersecretion and pain in ulcer patients, as noted above, has led to some skepticism concerning the psychologic etiology. Undoubtedly, one factor is the absence of buffering food. In addition is the fact that much of the psychologic conflict thought to give rise to physiologic reactions conducive to ulceration is of an unconscious nature and hence goes on waking or sleeping—in fact, during sleep has more complete and unimpeded sway.

The customary medical treatment of ulcer, so often successful in treating the acute phase, fits well into these theories of etiology. The patient who characteristically drives himself, resists giving in to his pain, who does not take care of himself, is frequently ashamed to appear soft, to admit his wish to give up and be taken care of. However, when he finally becomes sick, has a hemorrhage or perforation or is forced in one way or another to admit he is sick, put himself in the care of a physician and enter a hospital, he then has a face-saving, acceptable excuse to let down and accept care, frequent feedings, backrubs, mothering nurses, kindly paternal doctors, etc. This treatment has rationale and efficacy over and above the purely biologic considerations. But

when he is recovered, when he can no longer justify to himself this life of indolence and self-indulgence, he has to be up and at 'em, and to hell with doctors, diets and medicines. The other common type, the overtly passive dependent, or the person simply deprived by circumstances of adequate satisfaction of these needs also responds to this regime of T.L.C., but the problem with him may be in getting rid of him. He laps it up and is unashamed.

It is important to stress here that one must not fall into the error of too much generalization or expect typical, classical stereotypes. It is probably true that the basic conflict of the ulcer patient, namely, lack of satisfaction of dependent receptive "oral" needs and resulting anxiety and resentment, is nearly always to be found, but the variations in the individual picture are as infinite as individuals. It is necessary to study each case as an individual, his personality structure, his reaction patterns and the circumstances of his life, his environment and his interpersonal relationships, past, present and future, in order to really understand why he gets ulcers.

To quote Dr. Leon Saul: "What one must learn is to recognize this common feature—the needs and how they are frustrated—in the very different forms in which it presents itself in different cases. The treatment will depend on what one finds."

---

### **Pernicious Anemia Treated by Nasal Spray Inhalation.**

An effective and inexpensive means of treating pernicious anemia—a serious blood condition—has been found by the administration of vitamin B-12 through inhalation or use of a nasal spray.

Twelve patients who had a return of the disease after its apparent cessation were successfully treated by this method. In 20 other patients the symptoms of the disease were held in abatement for periods up to 18 months with the same treatment.

Drs. Raymond W. Monto and John W. Rebuck,

Detroit, wrote in the Archives of Internal Medicine, published by the American Medical Association, that this method of therapy has produced no evidence of toxicity or sensitivity.

Previous methods of treating pernicious anemia, including the eating of sufficient quantities of fresh liver to be effective, oral administration of liver extracts and massive doses of vitamin B-12, and injection of vitamin B-12, have been successful, but have proved to be unpalatable or very costly, the doctors pointed out.



## REHABILITATION FROM THE VIEWPOINT OF A PHYSICIAN IN INDUSTRY\*

C. L. SAVAGE, M.D., F.A.C.P.,  
Waynesboro, Virginia

Unfortunately, the word rehabilitation brings to mind far too frequently the mental picture of paraplegics and amputees. While this group of individuals is a very important one (and incidentally is a job which is being well done), the number of individuals with such difficulties in the average physician's practice is so small that he, like most of us, is prone to think of rehabilitation as something the other fellow must do. In reality, rehabilitation is the final phase of treatment of every patient. The degree to which it must be applied varies with the nature of the disability.

Failure to consider this phase of your patient's recovery can result in considerable economic loss to the individual and his family through failure to return to his occupation as soon as he might have, commensurate with proper protection of his health.

Early ambulation has shortened the recovery period for most surgical cases and hastened their rehabilitation. Physical medicine would do the same for many fractures which are now kept in casts for weeks and subsequently may require weeks of physiotherapy. Earlier utilization of physical medicine could help considerably.

*Industry* can play an important part in rehabilitation by placing injured individuals on jobs which will permit safe use of the injured part of body or which will permit gradually increasing activity. We, in industry, have found that such measures hastened recovery and often prevent permanent disability. Gradual increase in activities and proper work placement can aid in physiological recovery.

Such practices require an understanding and willing industry. Unfortunately, we still have with us industries whose attitude is "full work or no work". In other words, let compensation insurance pay the bill until this individual is completely recovered. This policy is not good for the employee. It encourages malingering and the development of traumatic neurosis. Forward looking insurance companies are encouraging physical medicine and

rehabilitation centers, both as humane endeavors and an economic procedure. Shortsighted insurance companies (of which there are far too many) adopt the attitude of settling with the individual as soon as possible, leaving him as a public charge for you and me to support through our welfare programs. Such practices should be prevented. Changes in our compensation legislation have been of some help. However, we still are not utilizing our physical medicine and rehabilitation facilities sufficiently. Insofar as compensation cases are concerned, no insurance company should be permitted to close the case until the compensation commission has adequate assurance that the individual has been rehabilitated as much as possible, considering the nature and extent of the injuries.

Large industry has in many instances recognized the value of aiding in the rehabilitation of its employees, but large industry is only a small employer in Virginia. Small industry employers have the majority of the wage-roll workers. You, as physicians, can influence the management of this type of industry to aid in rehabilitation, not only of the injured but the chronically ill—the arrested TB., the rheumatic heart disease, the asthmatic, chronic nephritic, etc. Obviously, you must acquire knowledge of work requirements if you are to intelligently aid in work placement; see the job in actual operation and ask yourself, "Could I do that job safely without harm to my health if I had what my patient has?" This is rehabilitation. It is our responsibility. Are we fulfilling our duties.

We must bear in mind that what is applicable to those injured in industry is equally applicable to those injured elsewhere. When one examines the statistics, we find that industry, although it is growing rapidly, is decreasing its incidence of injuries. In 1952, 34,500 workers were killed off the job and 15,000 on the job. There were 2.6 million off-the-job injuries and 2 million on-the-job injuries reported. It is to be noted that the 49,000 deaths account for a little more than half of the total accidental deaths, which were 96,000. Thus, the oppor-

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953, as a part of the Panel Discussion on Rehabilitation.

tunity to rehabilitate will arise more often from sources other than industry. Are you missing these opportunities?

A few examples will serve a purpose: We have an expert lathe operator who lost an eye. He is completely rehabilitated and is still an expert lathe operator. Many employees with unilateral amblyopia are doing as good work, and at times better, on machines, as those with no impairment of vision. An amputee from peripheral vascular disease (age 53) has an artificial leg and is performing a day's work. Several employees with mixed rheumatoid and

osteo-arthritis are carrying on with remarkably good attendance records in view of their handicaps. One case of multiple sclerosis has had an excellent attendance record and has been doing a good day's work in the Machine Shop.

Burt Hanman, in his book, "Physical Capacity and Job Placement," has emphasized the positive approach. He points out that we should place employees with reference to their abilities and not their handicaps. After all, each and every one of us is handicapped in one way or another with reference to various and sundry occupations.

---

### Major Surgery in Elderly Patients Relatively Safe.

Major surgical operations can be carried out in patients over 70 years of age with reasonably low risks. Therefore, adequate surgical care should be made available to older persons not merely to save life but also to relieve discomfort and disability, in the opinion of Drs. John D. Stewart and Guy S. Alfano, Buffalo, N. Y. associated with the department of surgery of the University of Buffalo (N. Y.) Medical School and the E. J. Meyer Memorial Hospital.

They based their conclusions on two studies of persons over the age of 70 years who underwent surgical procedures. One study consisted of 204 general surgical patients who underwent 290 major operations, and the other of 43 patients who had major abdominal surgery.

The average age of the 43 patients was 74.4 years, the oldest being 88, the doctors wrote in the current (February 20) *Journal of the American Medical Association*. Four of the patients (nine per cent) died; two deaths were caused by heart conditions.

The average age for the series of 204 patients who underwent 290 general surgical procedures was 76.8 years, the oldest patient being 94. The overall mortality rate was 13 per cent (39 patients).

However, the doctors pointed out, 21 of the 39 deaths probably had little relation to the surgical operation; 17 of the 39 patients who died had advanced cancer. If these deaths were excluded, the mortality rate was approximately eight per cent, they added. Respiratory and heart and blood vessel complications were most commonly noted in the fatal cases.

There were no complications following 190 operations in the larger group, the doctors stated. When complications occurred, the commonest were those affecting the respiratory system, the surgical wound, and the heart and blood vessels. "Considering the age of the patients in these studies and the severity of their diseases, one must conclude that the surgical operations were well tolerated."

In considering the problems of preoperative and postoperative care of the elderly, "one is impressed with the point that they differ only in degree as compared with the surgical care of younger patients," the doctors stated. The margin of safety is less, and sharper attention to details is necessary. Expert nursing care is a potent factor in recovery. They added that the daily routine of the elderly surgical patient should be upset as little as possible, and that he should be returned to his normal environment and activities as soon as practicable.

## THE ROLE OF THE GENERAL PRACTITIONER IN THE PREVENTION OF BLINDNESS

E. G. GILL, M.D.,  
Roanoke, Virginia

Next to life itself the greatest single asset the individual possesses is sight. Only one organ in the body, the heart, functions more constantly than the eye. There is no single examination which can give you as much information about the body as an examination of the eyes. This is the only place in the body where you can see the progress of a pathological lesion without a biopsy.

The general practitioner should make a routine visual record of every new patient who comes in for examination. Along with the routine visual examination should be a routine Wassermann test. One of the late complications of neurosyphilis, optic atrophy, could be prevented if treatment were given in an early stage of luetic infection.

### GLAUCOMA

Of the 314,000\* people blind in the United States, one-eighth of them are due to glaucoma. The general practitioner should inquire into the history of glaucoma before prescribing certain drugs, such as atropine or instilling any mydriatic for fundus study. Glaucoma has resulted from giving atropine and its alkaloids by mouth for various general conditions; digitalis and quinine have also been known to effect the vision.

### DRUGS FOR REDUCING DIETS

Various drugs which are advertised in the lay press for reducing diets have in many instances effected the nutrition of the eye and in some cases resulted in amblyopia. One drug which has been used to reduce weight is dinitrophenol which, in some instances, has resulted in the formation of cataracts. Before any drug is prescribed to reduce weight it would be wise to consult an ophthalmologist as to possible detrimental effects on the eyes.

### DIABETES

Eye complications resulting from diabetes are cataracts, iritis, retinitis and hemorrhage. These complications, in many instances, can be prevented and controlled by an alert general practitioner. Diet and insulin are the only means of preventing these

complications. Every diabetic patient should be under the continued observation of a competent ophthalmologist. In these cases the knowledge of the general practitioner and the ophthalmologist should be complementary.

### MALIGNANT EXOPHTHALMOS

Malignant exophthalmos has sometimes resulted from thyroidectomy in women of the menopause age who show eye signs but few systemic signs of hyperthyroidism. Any practitioner who is called to give anesthesia should try to avoid undue pressure on the eye; it can result in central retinal occlusion and corneal abrasions. Care should be used to avoid accidental dropping of ether in the eye; this can cause severe damage to the corneal epithelium.

### OBSTETRICS

Congenital anomalies of the eye may develop sometimes if the mother sustains even a trivial illness during the first trimester of pregnancy. If a patient develops German measles during this critical period, abortion should be considered. Retinal detachment is one of the complications of pregnancy and every pregnant mother should have her eyes examined periodically by a competent ophthalmologist. The care of the eyes of the newborn by both the doctor and the nurse is most important. They should never forget the prophylactic measures in the prevention of ophthalmic neonatorum by the instillation of silver nitrate. Two and eight-tenths per cent of blindness in children is caused by prenatal syphilis. The Wassermann test should be a part of the routine examination of every pregnant woman. If positive, prompt and energetic treatment should be instituted. All premature infants should have their eyes carefully examined; doctors and nurses should be on the alert for a condition known as retrolental fibroplasia which occurs in 15% of these infants.

### PEDIATRICIAN

The pediatrician should observe the motility of the infant's eyes at an early date and if there is any indication of crossed eyes or a squint they should be referred to an ophthalmologist. The squinting eye should be treated before the child is three years of

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.



age. After that time definite organic changes take place in the eye and vision is usually lost in the squinting eye. In acute infectious diseases, such as measles and chicken pox, the child's eyes should be carefully guarded and, if there is any suspicion of corneal ulcer or eye complication, the ophthalmologist should be consulted.

HOW PEOPLE BECOME BLIND<sup>2</sup>

CHILDREN

- Defects of Prenatal Origin, Cause Unknown --- 49%  
More and more babies are being kept alive, but some of these infants escape death only to become blind from diseases, such as retrolental fibroplasia.
- Infectious Diseases ----- 14%  
Most serious is syphilis. An estimated 100,000 babies face blindness because of syphilis.
- Heredity ----- 16%  
Main problem is to educate people with hereditary blindness concerning the dangers of passing the defect on to their children.
- Injuries ----- 7%  
An estimated 90,000 eye accidents occur annually among school children. About 1,000 of these accidents cause a child to lose the sight of one or both eyes.
- Others ----- 14%  
Includes tumors, general diseases, poisonings, and unknown causes.

ADULTS

- Cataracts ----- 17%  
About 49,000 Americans are blind from cataracts, which is a cloudiness of the lens of the eye. Many of these people could see again with the help of surgery, but are unaware that they can be helped.
- Glaucoma ----- 12%  
This disease, which usually strikes after 40, causes the eyeball to harden. The resulting pressure destroys the optic nerve and sight is lost. Early treatment is vital to save sight.
- Infectious Diseases ----- 23%  
Syphilis is most frequent. But the new "miracle drugs" now make it possible to cure cases in a short time. Provided treatment is adequate and started early, blindness may be averted.
- Injuries ----- 9%  
About 300,000 eye injuries occur each year in industrial plants. Thousands of others happen in homes, and on farms.
- General Diseases ----- 6%  
This category includes diabetes and high blood pressure.
- Others ----- 11%  
Including poisonings, tumors, defects of prenatal origin.
- Unknown ----- 22%

HOW DO WE STAND IN THE FIGHT AGAINST BLINDNESS?

Blindness is being defeated on some fronts, but is gaining on others. What are our chances for good sight?

Among children there has been:

A 54% drop in blindness due to venereal disease since 1936.

A 96% reduction in blindness from "babies' sore eyes" since 1908.

A 30% decrease during past 14 years in blindness due to injuries.

But, on the other hand, since 1936 there has been a sharp increase in blindness from prenatal and hereditary causes. This is mainly due to retrolental fibroplasia, a disease of unknown origin which usually strikes only premature babies. It now accounts for more than 50% of blindness among pre-school children in some states.

Among adults, the number of sightless is increasing at the rate of 4,800 each year. The reason: more people are living longer as medicine stretches the life span, and more are stricken by blindness diseases that usually occur in later life.

BLINDNESS IS INCREASING, YET MORE THAN HALF CAN BE PREVENTED

*Every 24 minutes someone goes blind!* Today there are more than 260,000 blind Americans. Another 1,000,000 men and women are blind in one eye; and thousands of Americans have vision that is only barely useful.

*Sixty Americans become blind each day; 420 each week; 22,000 during each year.* Yet more than half of these men and women should be able to read this page as clearly as you! Medical science now has the knowledge to prevent at least one out of every two cases of blindness. But this knowledge is worthless if it is not put to use.

HOW WE CAN PREVENT BLINDNESS

- I. *Regular Eye Examinations for School Children*  
Children seldom complain about poor vision because they don't know how well they ought to see. It's up to parents and teachers to know the symptoms of eye trouble and to arrange for a professional examination when indicated. Watch for these signs of visual defects in children:  
Rubs eyes often, blinks more than usual, frowns, shuts or covers one eye. Has difficulty reading or

doing other close work, inflamed eyes, red-rimmed or swollen lids, recurring sties.

## II. Guard Against Accidents

Most blindness due to accident can be prevented! Example: Children most frequently suffer eye injuries while playing unsupervised games. Here's what you can do: keep dangerous instruments, such as scissors, knives, etc., away from children. See that youngsters do not take chances with dangerous "toys" like BB guns, slingshots, bows and arrows. If you work in an industrial plant or have a home work-shop, remember that one bit of flying wood or metal can cause blindness. Wear safety goggles wherever there is a chance of eye accident!

## III. Take Proper Care of the Eyes

Healthy eyes never "wear out." You can read or watch television as much as you like without ruining your vision. But your eyes become tired quickly if not used properly. Shade light at eye level so that it is diffused without glare. Make sure your television set is adjusted correctly, and don't sit too close to the set.

Never rub your eye, especially if there is a foreign body in it. Pull down the upper lid over the lower and let the tears wash away the speck. If this doesn't do the job, wash the eye with luke-warm tap water. See your physician if the speck remains.

*One Out of Four Children Needs Eye Care*, yet many of these 6,500,000 children are not being treated because of neglect.

Sixty thousand American school youngsters need special help to keep abreast of their normally seeing classmates. This help includes facilities such as books printed in large size type, special desks and other equipment. Still there are over 52,000 children who need these aids and don't have them.

*An estimated 90,000 Eye Accidents Occur Annually Among American Youngsters.* About 1,000 of these cause the child to lose the sight of one or both eyes. Boys have three times as many eye mishaps as girls; junior high school age is the most dangerous.

Safety engineers estimate that 90% of the 300,000 annual eye accidents in industry can be prevented. Each year thousands of men and women are saved

from blindness simply because safety goggles and other eye protection were worn when necessary.

*Poor Vision Hampers U. S. Defense Program.* Poor vision is a "fifth column" sabotaging America's defense effort. Defective eyesight costs our country about 7% of her military manpower, and slows down the production efforts of nearly 40% of her industrial workers. During the last war, the enlisted men for about 20 infantry divisions were lost to the U. S. Armed Forces because of poor sight. On the production front, four out of every ten workers in small plants have a vision defect that reduces their efficiency. Poor vision is an enemy; guard against it.

## IV. Periodic Eye Checkups—Especially After 40

After 40 cataract and glaucoma, two major eye diseases are leading causes of blindness. Early treatment is important, especially in glaucoma. That's why regular, periodic checkups are so important. Body ailments, such as diabetes, which affects your eyes, also occur most often in later life. After you reach 40, an ounce of prevention is worth more than a pound of cure—it is often the difference between good sight and blindness.

*What Blindness Costs the U. S.* An estimated \$150,000,000<sup>4</sup> is expended annually in educating and caring for the blind. In addition there is the cost of compensating industrial workers for blinding eye accidents. An estimated 80,000 men and women have lost one eye in industrial accidents, and another 8,000 are completely blind from injuries. The total cost to industry—in compensation, medical expenses and lost production—is well over \$200,000,000 a year. Of course, the full cost of blindness in terms of human suffering can never be calculated.

*800,000 Slowly Going Blind, But Don't Know It.* Over 800,000 men and women over 40 in this country are slowly being blinded by glaucoma and don't know it. Symptoms may be so mild that the patient feels no pain at all. If glaucoma is found early, blindness can usually be prevented. There is no way to restore sight lost through glaucoma, but the progress of the disease can be halted. When treatment is delayed, sight may be lost which can never be regained.

*Preventing Blindness Is Everybody's Job.* Saving sight is a job for everyone—the parent, worker, and businessman—as well as the doctor, nurse, social

worker, teacher and public health officer. There is need for better vision testing of school children, for more effective ways to reduce accidents, and to find and help those in need of eye care. And the need is for an intensified program of public education, and more research into the causes of blinding eye diseases.

*What U. S. Spends to Prevent Blindness.* Despite the huge cost of blindness, less than \$500,000 a year is spent by the United States for organized prevention of blindness activity. And less than one million dollars a year is spent for research on eye diseases. All told, America spends a total of about one-and-a-half million dollars annually to fight blindness. Compare this to the following statistics:

Over-the-counter eye lotions .....	\$ 2,625,000
Eye cosmetics .....	5,095,000
Over-the-counter headache relievers ..	101,510,000
Candy and chewing gum .....	1,854,548,000
Tobacco products and supplies .....	4,124,467,000
Alcoholic beverages .....	8,800,000,000

## BIBLIOGRAPHY

1. Givner, I.: *Am. J. Ophth.*, **35**: pp. 1253-1262, September, 1952.
2. The National Society for the Prevention of Blindness, Publication No. 163.
3. Rennick, D. P.: *Drug Topics—Reports Trends in Sales of 141 Products*, *Drug Topics*, **93**: 1, September 26, 1949.
4. Foote, Franklin M.: *Nat. Soc. Prevention of Blindness*, Personal Communication.

711 South Jefferson Street.

### Unusual Group of Symptoms in Three Patients Described.

An unusual group of symptoms, consisting of recurrent episodes of unnatural drowsiness, excessive sleep, extreme hunger and such abnormal mental states as depression, clouded senses, partial or total amnesia for certain periods, and psychomotor retardation, were described in the March 27 *Journal of the American Medical Association*.

The occurrence of such symptoms in three patients was reported by Dr. Alfred Gallinek, New York. In two of the patients, the symptoms followed an acute infectious illness.

One case described by Dr. Gallinek was that of a 58-year-old woman who began experiencing the symptoms following an acute attack of diarrhea in Haiti 12 years ago. The episodes occur two or three times a year, lasting for about three weeks.

First the patient becomes excessively hungry, with a special craving for sweets. She then experiences extreme drowsiness, bodily discomfort, fatigue, weak-

ness, and sleeps 18 to 24 hours each day. When awake during this period of the attack, the patient shows slowness of speech and thought and a reduction of all motor activity. The third phase of the attack is characterized by abnormal mental states.

The second case reported was that of a 34-year-old man who has experienced similar symptoms since he was 17 years of age. The third patient was a 16-year-old youth who began suffering from such symptoms following an attack of chickenpox and subsequent brain fever at the age of 14 years.

Drug therapy during the last year has resulted in a very remarkable improvement in the older patients, according to Dr. Gallinek. Although the episodes have continued, they occur at longer intervals and are much milder. No attempt at therapy has been made in the case of the young boy.

Dr. Gallinek is associated with the department of neurology, Columbia University College of Physicians and Surgeons, and the neurological institute of the Presbyterian Hospital of New York.



NOTES  
ON  
PULMONARY TUBERCULOSIS\*

Standard Diagnostic  
Study (III)  
Tuberculin Test (B)

THE VOLLMER PATCH TEST: *Method of Application:*

A square of filter paper saturated with Old Tuberculin (O.T.) is applied to the skin supported by gauze and a strip of adhesive tape. Usually a surface is selected in the region of the upper sternum or between the scapulae. The skin surface should be cleansed and defatted with acetone. The filter paper should remain in contact for 48 hours, and the test read after *an additional* 48 hours. The subject (or parent) must be specifically instructed to remove the patch 48 hours after it is applied—warned *not* to permit it to remain until the test is normally due to be read. (96 hours of continuous contact has been known to cause unnecessarily severe inflammatory reactions). The subject (or parent) should be instructed that should the area become irritated to a point of real annoyance before the expiration of the first 48 hours he should seek his doctor's advice with respect to earlier removal, or if a physician can not be contacted, to remove it himself, when in doubt.

*Interpretation:* A positive reaction shows redness, infiltration, closely set elevations and depressions upon the skin area to which the square containing tuberculin had been applied. There will seldom be vesiculation *provided* the patch is removed 48 hours following application.

*Advantages:* More easily applied (without use of needle); singularly well adapted therefore for children and for the testing of single individuals in office practice.

Properly applied and with good cooperation the test can be only slightly if at all less accurate than the Mantoux (intradermal test of 1:10,000 O.T.). Patches are stocked by the Bureau of Biologics, Virginia State Health Department, and are supplied upon request and without cost to private physicians and health departments. They should be kept in a cool place until used but need not be refrigerated;

expiration date on the patch test should be noted—this *can* consist of a maximum of 18 months.

*Disadvantages:* The amount of tuberculin coming in contact with the skin is not dependably uniform. The test is subject to the cooperation of the person being examined. If the patch is removed too early, becomes loosened or wet, the reading will be inaccurate.

There is only the one strength test (See April issue, *Virginia Medical Monthly*); if negative, higher concentrations of tuberculin must then be introduced intracutaneously, when the tuberculin test is employed for differential diagnostic study.

THE MANTOUX TEST: *Method of Administration.*

The Mantoux test is administered intracutaneously using either O.T. or P.P.D. A "tuberculin syringe" should be used; this has a blue plunger and is graduated in tenths of a cubic centimeter. A short bevelled 26-gauge, 3/8 to 1/2 inch steel needle is standard, for individual patients; a separate needle can well be used for each patient if the group is not too large. The syringe (and needle) should be initially dry (to prevent dilution of tuberculin particularly when only .1cc is drawn into the syringe; the drawing of multiple doses of tuberculin into one syringe for multiple injections without refilling is generally advised against.)

Needles and syringes, and ideally the sterilizing equipment, used for tuberculin testing, should not be used for or in connection with other types of injections. Minute amounts of tuberculin which remain in the needles and syringes even after repeated sterilization may render other types of tests invalid.

The flexor surface of the mid-upper forearm is cleansed with acetone or alcohol. When the skin is dry, it should be rendered firmly taut; then inject exactly 0.1 c.c. of whichever type and strength tuberculin is being employed, into the upper layer. Care must be taken not to penetrate under the skin. When the injection is really *intra*-cutaneous, it produces a small raised bleb or wheal, which moves with the

\*Prepared by the Virginia State Health Department.

skin; otherwise the material has been injected *under* the skin and the test will be unsatisfactory. Inject exactly one-tenth cubic centimeter; do not guess at the amount from the size of the wheal produced by the injection. Needless to say, do not give a second test immediately following a full dose that has been administered too deeply; the patient's reaction to the latter should be observed before a second attempt is made (48 or more hours later) to inject the tuberculin *intra-cutaneously*.

*Interpretation:* Customarily, a reading is recommended to be made after 48 or 72 hours. One naturally questions whether there *can* be *two* such widely divergent *optimal* times to read a tuberculin test. There *can* be, and *is*, a difference of opinion as to what is the optimal period.

The Virginia State Health Department generally, uses the 48 hour period. After 48 hours positive tests tend to fade, especially those of 3 plus and under; accordingly a 1 plus test *may* be completely missed when a later reading is made.

If for any reason the individual cannot be seen at the end of 48 hours, he should, if possible, be contacted within 96 hours of the time of injection, for the reaction, though declining, *may* be visible for several days past the optimal time for reading. A negative test under these circumstances would call for a repeat test, especially if the individual himself had noted some reaction at 48 hours.

The forearm should be in good light and flexed a little at the elbow. (If held fully extended, the muscles may be taut enough to obliterate evidence of a positive test.)

The positive reactor has an induration edema of at least 5 mm measured in its widest diameter. *The presence of redness or erythema is not significant unless associated with edema.* When the induration (edema) is absent, the reading is negative; when there is a trace of induration, less than 5 mm in diameter, the reading is negative or at the most "doubtful".

In evaluating a reaction it is well to look across the arm rather than down on it. Pass a finger over the tested area. Induration caused by the edema can sometimes be felt when it does not produce an elevation that can be seen.

Positive reactions are recorded (arbitrarily) as follows:

- one plus = 5-10 mm. induration
- two plus = 10-20 mm. induration

- three plus = Exceeding 20 mm. induration
- four plus = Extensive edema with central necrosis

(Very rarely, instead of or in addition to edema, vesiculation may occur)

When test is negative or "doubtful", retesting with the same or higher concentration can be done immediately, or after any convenient interval.

#### *Comparison Table of Strengths:*

O.T.	P.P.D.
1:100 (100 times stronger than routine initial dose)	= 0.005—2nd strength 250 times stronger than 1st strength
1:1,000 (10 times stronger than routine initial dose)	= 0.0002—intermediate strength (10 times stronger than 1st strength)
1:10,000 (routine initial dose)	= 0.00002—1st strength

(The Patch Test is roughly equivalent to 1:10,000 O.T.)

*Initial Dosage:* Ideally, the fewer tests required to establish the suspect's tuberculin status the better. But one is obligated to take all reasonable precaution against unduly severe response, not only because of the inconvenience of a 4 plus reaction locally (skin), but to protect against a potentially harmful *focal* reaction which also *may* occur in the lung (or other organs) where the patient is highly allergic.

It stands to reason that the higher the initial dose the more often one will observe a 4 plus reaction.

However, from a practical standpoint, neither the 1:10,000 nor the 1:1,000 O.T. strengths produce 4 plus reactions often enough to serve as a deterrent to their use as the initial test strength, where no known contraindications exist. Where an x-ray has preceded the tuberculin testing, as happens almost invariably in adults (suspects and close contacts) the initial dose can be reduced to 1:100,000 if the pulmonary lesion appears to be a little more than moderately acute.

In contrast, in children, (suspects and close contacts) due in part to technical difficulties in obtaining a satisfactory film, x-rays are usually restricted to those having a positive tuberculin reaction. Accordingly, except for the comparatively rare instances where the suspect child's lung can conveniently be screened fluoroscopically prior to tuberculin test, the initial test had best not be stronger than 1:10,000,

or preferably might consist of a patch test where good cooperation can be anticipated; as noted above the patch can be removed early if an excessive reaction occurs.

Particularly should the patch test (when removed early) or a 1:100,000 O.T. Mantoux be employed in children having swollen lymph glands, ulcerations or discharging sinuses or other extra-pulmonary forms of disease.

*Contra-indications (General):* Tuberculin testing of any strength or type should not be attempted:

1. In acute illness
2. In diseases of the skin.
3. Concurrently with smallpox vaccination.

*"False Negative" Reactions* (where tests have been properly administered) are sometimes seen:

1. In acute (toxic) pulmonary tuberculosis
2. Early in tuberculous effusion.
3. During concurrent exanthemata.
4. During the early anergic phase of primary infection. Because 6-8 weeks are ordinarily required for a tuberculin test to become positive following in-

fection, the State Health Department recommends that a child, who has been in close contact with an active case of pulmonary tuberculosis, should be tuberculin tested a second time 2-3 months following break in contact, if the first tuberculin test taken during the potentially anergic stage has been negative.

5. Known positive tuberculin tests have been observed to revert to negative in a small percentage of persons who have never had, or who no longer have clinically active tuberculosis.

6. A negative tuberculin test, including higher concentrations, is reported with extreme rarity upon persons with clinical tuberculosis even with a positive sputum, and where the disease is not acute. This seeming paradox should not be permitted to undermine one's confidence in the tuberculin test for use in the many many instances where its application is of tremendous, not to say crucial importance; rather had this exception better be cited as merely one more example of an age-old adage to the effect that the words "always" and "never" have no place in a physician's vocabulary, with respect to *any* disease!

## New Books.

Below are given names of some of the newer books in the Tompkins-McCaw Library of the Medical College of Virginia. These may be borrowed under usual library rules.

- Biggs and McFarlane—Human blood coagulation and its disorders. 1953.
- Burrow—Science and man's behavior. 1953.
- Cole and Elman—Textbook of general surgery. 6th edition, 1952.
- Crohn—Regional ileitis, 1949.
- Current therapy. 1954.
- Fisher and Hawley—A few buttons missing. 1951.
- Hauser—Diseases of the foot. 2nd edition, 1950.

Keys, et al—Biology of human starvation. Vols. I and II. 1950.

Memoirs of the society for endocrinology—The determination of adrenocortical steroids and their metabolites. 1953.

Memoirs of the society for endocrinology—The thyroid gland. 1953.

Methods in medical research. Vol. 6, 1954.

Moloney—Understanding the Japanese mind. 1954.

Murphy—Heredity in uterine cancer. 1952.

Podolsky—The jealous child. 1954.

Podolsky—Music therapy. 1954.

Potter—Fetal and neonatal death. 2nd edition, 1949.

Russell—Poliomyelitis. 1952.

Slater—Psychotic and neurotic illnesses in twins. 1953.

Yorke—Salt and the heart. 1st edition, 1953.



## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals***Hospitalization as a Corrective Experience\***  
(The Story of Mrs. Jones)

Virginia has the distinction of being the first state to have a hospital totally for the care of the mentally ill. The philosophy at that time was for confinement. Today the aim is for the rehabilitation of over 80% of the patients. This is calculated to be the number that, with present knowledge, can be helped to lead useful lives again.

Great advances have been brought about in physical medicine because of the emergencies created by the recent war conditions. Rapid advances were also made during the last war in the treatment of mental patients. Some of these include narcoanalysis, group therapy, together with refinements of other techniques in caring for patients. With the shortage of labor created by the war, Virginia hospitals, like all other mental hospitals in the United States, were faced with a dire shortage of personnel. Patients had to be used in increasing number to perform necessary functions to keep the hospitals running. It was noted that many of the patients improved greatly when they were given some useful tasks to perform. Out of this grew the concept of hospitalization as a corrective experience.

Many of the patients at Southwestern State Hospital have become ill because they were unable to face the demands of living at home. As life became too difficult for them to face, they withdrew from the reality of everyday living and either developed strange ideas or physical complaints when there was no organic basis for these complaints. It was the hospital's job to guide them back on the road to recovery.

To demonstrate how a hospital can set up an environment which serves to correct the previous harmful experience of the patient, I would like to tell you a story of Mrs. Jones. Mrs. Jones is not the real name of a patient at Southwestern State Hospital, but there is a patient at Southwestern State Hospital whose story this belongs to. Mrs. Jones was born in a small coal mining town in West Virginia. It was necessary that she and her mother live with

relatives who had children of their own. As a small child, Mrs. J. felt that she didn't belong here and that this really wasn't her home. Her uncle was a man who had strait-laced ideas on how children should be brought up. To him life was very real and earnest. Even children should not be allowed to have the frivolities of having a good time. When Mrs. Jones entered adolescence, she and her mother moved to Virginia to live with another relative. Here, too, our patient was closely supervised. She was not allowed to be out in the evening or to have dates with boys. However, Mrs. Jones managed to escape and to surreptitiously occasionally have dates. She married an immature man who had difficulty holding a job. Mrs. Jones and her husband had four children and the children were a source of much pleasure to Mrs. Jones. She worked to support herself and the children and received some assistance from her husband's family. Many of the jobs that she had were in factories which had the "piece-work" system. Mrs. Jones had to be good, she had to complete a certain number of projects, and each task had to be meticulously performed. She would check it and re-check it to make sure it was right. She could not tolerate the slightest imperfection. Of course, she was unable to keep up the production schedule and was discharged. She, however, did get a job in a laundry and was able to accomplish at this task and to do satisfactory work in which she received gratification as well as money to support her family. Her husband died a horrible death in another state. His body was so mutilated that it was impossible to recognize him except for identification papers which he had on his person and also several tattoos.

Mrs. Jones was haunted with the question "was this really her husband they had buried?" It was impossible for her to realize that he would not again return to her home and knock on the back door, to be allowed to enter as he had done so many times before. "Was she in some indirect way responsible for his death?" "Could she have changed him?" "Did she take care of him as she should?"

It became necessary for Mrs. Jones to stop working and take care of her children. One of her

\*Article prepared by Thomas H. Lahey, M.A., Staff Psychologist, Southwestern State Hospital, Marion, Virginia.

children became ill and had to be hospitalized. She also incurred heavy expense in necessary improvements to her home. Faced with the inability to earn her living and family worries, Mrs. Jones became increasingly depressed. She could not sleep at night and lost weight. Mrs. J. became obsessed with the thought that she was going to kill her youngest child. She was unable to hold the child and take care of her because when she was near her, the thought would enter her mind. She was panicked by the thought that she would carry out her ideas. The situation became so difficult and Mrs. J. was so upset that she was hospitalized at Southwestern State Hospital. On admission, Mrs. J. received a thorough physical examination and was seen by the psychologist and the psychiatrist. A plan was set up to help her on the road to recovery. Because she had succeeded so well at her job in a laundry, she was given a similar job in the Hospital Laundry. The employee supervisor of the laundry praised Mrs. J. for her work and Mrs. J. received much gratification from performing a task. No pressure was put on her to accomplish. She was seen twice a week for interviews by a member of the staff and it was pointed out to her that she was performing a useful task for the hospital and that she should not feel obligated to the hospital for the care which she was receiving. Her family difficulties were discussed with her and gradually she came to understand herself and to function more adequately. Initially, she wore her hair in a very severe bob and wore dark clothes and no make-up. She was encouraged to wear whatever type of clothing she liked and she soon asked the hospital beautician to give her a permanent. She learned how to use make-up correctly and started attending the recreational activities. She enjoyed the movies and the dances and she was consequently given approval to attend these functions. A relative gave her a small amount of money and she was allowed to go on a shopping spree. She bought the material for a dress. She selected a red dress and some dress shoes. She has increasingly become more relaxed and has found out that, although there are difficulties in almost

everyone's life, life in general can hold a certain amount of pleasure also and it was not wrong to have a certain amount of fun. Mrs. J. has learned to smile and now takes delight in coming and telling of comical incidents that happened to her at the hospital. She is regaining confidence that she can leave the hospital and support her children and earn her own living. She no longer is possessed with the fears that she is going to injure her child and when the child was brought to see her she was able to play with her and enjoyed her very much.

This is only one example of how the State Hospital serves as a corrective experience for the total individual. A visit to the hospital will show many patients who are able to work at certain jobs and receive gratification from them. Some of them will be working on the hospital farm, others will be helping in the food service. In the diagnostic and admission building, you may be met by an attractive and courteous middle-aged woman who functions as a receptionist. You would not realize that this woman is a patient at the hospital and only a few months before was very withdrawn and was a severely emotionally upset and psychotic patient. She is now on the road to recovery. The receptionist in the physical medical building is also a patient. To be sure, these patients are supervised by an employee who keeps a friendly watch over them and helps them to see that they can function adequately and can be a useful member of society. All of the employees have an obligation to help the patients become more adjusted and useful citizens, besides taking their part in the task of operating the hospital and carrying out their routine duties. Some of the patients are members of a garden club class which is sponsored by the Marion Garden Club. They plant flowers, watch them grow and make flower arrangements. Some of them, at first, do not actively engage in the projects but only watch and as they are constantly encouraged to try their hand at a variety of tasks; gardening, being a receptionist, clerking in the canteen, many of them finally are able eventually to leave the hospital and take up their lives in the community.

---

PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D  
*State Health Commissioner of Virginia*

Typhoid Fever Carriers

Revision of the list of typhoid carriers in Virginia has just been completed and 118 known carriers, involving 51 counties and 5 cities, have been registered from the various health departments throughout the state. The number of carriers has not changed materially in recent years, as evidenced by the fact that the inquiry sent out in 1950 brought in reports on 112 and those in 1952 and 1954 revealed 122 and 118 respectively. During the interval years additions to or subtractions from the list are made according to reports received from local health departments. Results of the annual examination of the stools of known carriers and of those who had the disease as long as one year previously are important in making a roster of typhoid carriers.

The control of typhoid fever in the state is largely dependent on the detection and supervision of this group which serves as the reservoir for typhoid organisms. The transmission of typhoid fever is through the fecaloral route and this chain must be broken if these people are to be prevented from spreading the disease.

Chloramphenicol has not proved helpful in destroying the bacteria in carriers. It is stated that cholecystectomy will eradicate the carrier state in about 90% of cases; however, the most successful means of breaking the link has been through supervision and education. Carriers should be taught that they have a chronic infection which they may transmit or carry to other people and that they have a responsibility in preventing this. They must be taught the rules of personal hygiene. They must be warned that they are not to handle food, milk or drink except in their own homes, and only for themselves or their immediate families who are known to have been immunized against typhoid fever. They must be advised to report any change of residence so that they may be listed in the files of the local health authority whose jurisdiction they are entering. Families of carriers must cooperate in all of

these measures and assume responsibility for maintaining their own immunizations.

During the past five years, the cases of typhoid fever reported in the state have been as follows:

1949	1950	1951	1952	1953
116	68	61	77	54

The reduction in the incidence of typhoid has been brought about through community efforts in establishing and maintaining environmental sanitation that insures safe water supplies, providing sanitary sewage disposal, and regulating the production and distribution of milk. Pasteurization of all milk is important in the control not only of typhoid fever but of many other diseases.

While there are fewer cases each year, this does not mean that we can relax in our efforts to prevent its spread. Except for those who have had the disease and for the group which maintains adequate protection through the use of vaccine, the susceptibility of the general public remains unchanged. We must remember that the disease is not eradicated and that any break in the barrier of protection that we have set up will result in its reappearance in the areas involved.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE  
DISEASE CONTROL

	March 1954	March 1953	Jan.- March 1954	Jan.- March 1953
Brucellosis -----	3	6	7	15
Diphtheria -----	2	15	19	44
Hepatitis -----	699	143	1695	570
Measles -----	4426	739	7306	1482
Meningococcal Infections	15	27	38	87
Polioomyelitis -----	6	2	12	7
Rocky Mt. Spotted Fever	0	0	0	0
Streptococcal Infections	508	540	1619	2144
(Including Scarlet Fever)				
Tularemia -----	0	3	16	14
Typhoid Fever -----	4	3	10	9
Animal Rabies -----	48	56	126	152



## MEDICO-LEGAL NOTES

**Air Embolism\***

Death from air embolism is a tragic catastrophe which has been reported following numerous injection procedures (tubal patency test, pneumothorax, pneumoperitoneum, ventriculography, intravenous infusions, perirenal insufflation, etc.) as well as during thoracic and thyroid surgery. Perhaps it is seen most frequently by the forensic pathologist after attempted criminal abortion when large amounts of air enter the venous circulation as frothy bubbles injected into the uterus as a soap solution. It has even been described following Caesarean<sup>3</sup> and normal vaginal delivery.<sup>6,7</sup> We have seen one case in our office after a spontaneous abortion.

The forensic pathologist must keep this possibility constantly in mind, lest the opportunity to demonstrate the phenomenon be forever lost by hindsight rather than proved by foresight. Probably everyone is more or less familiar with the more common form of venous or pulmonary air embolism. Here, relatively large amounts enter the venous circulation and are carried to the right heart and thence the pulmonary artery circulation. Relatively large amounts of air (100-150cc) are needed to produce death and the rapidity of entry is of the utmost importance.<sup>4,5,8</sup> Other factors determining the fatality are position and tachypnea. With the body positioned on the left side, air within the right ventricle is trapped away from the pulmonary artery allowing the pulmonary circulation to continue until the air is gradually absorbed. Knowledge of this mechanism can be life saving in some cases. The increase in respiratory rate may serve as an excretory mechanism for the entrapped air, since experimental work has demonstrated that in open chest observation with artificial breathing (preventing tachypnea), small amounts of injected air were consistently fatal.<sup>4</sup> It is claimed that if large amounts of air enter the venous circulation slowly, the air may pass the lung barrier and embolize to the coronary artery.<sup>8</sup> However, in the vast majority of cases, entry is sufficiently rapid to cause death from pulmonary block. Such factors as vasovagal reflex and reflex coronary spasm has been ruled out experimentally by previous

vagotomy, which failed to influence the results as compared with animals with intact vagi.<sup>1</sup>

In sharp contrast to venous embolism is the arterial type where air gains entrance to the left side of the heart via tears in the lung or pulmonary veins and then may embolize to the coronary or cerebral vessels. Besides extrinsic sources (injected air, air aspirated into pulmonary veins during surgery), intrinsic air in the lung itself is a potential source of danger. The establishment of a broncho-venous tear by such simple trauma as needle puncture of the lung or tearing of the lung substance by an adhesion during collapse therapy may serve as the portal of entry of air from the lung itself into the pulmonary vein. Most cases of so-called "pleural shock", occurring during attempted fluid aspiration when no air injection is involved, are probably in reality due to the above mechanism. The rarity of such accidents when dealing with normal lung suggests that pulmonary infiltration may be a needed factor, the diseased tissue preventing closure of these accidental communications.<sup>4</sup> Another mechanism of intrinsic arterial air embolism may occur in free escapes from diving or submersive apparatus. Here the victims fills his lungs with air at a greatly increased pressure beneath the surface and rises without breathing device to the top of the water. If he fails to "blow out" as he rises, the increase in air volume within the alveoli as the water pressure decreases may rupture the alveoli and small pulmonary veins allowing air under high pressure in the lung to enter the left side of the heart. These people sometimes die within minutes after being removed from the water, possibly from ventricular fibrillation secondary to myocardial ischemia from blocking of the coronary arteries with air. Again in sharp contrast to the venous type are the amount of air needed to cause death and the clinical symptoms. Kent and Blades (cited by Durant *et al*<sup>4</sup>) found that 1 cc. of air injected into the pulmonary vein of twenty-eight dogs was uniformly fatal. Other workers found severe ischemic disturbances of the myocardium by E. K. G. when .025 cc. of air was injected directly into the left anterior coronary artery of dogs, and that .05cc was often fatal.<sup>4</sup> Ventricular fibrillation was often observed. Therefore we may assume that in this form of air embolism, far smaller

\*Contributed by: George W. Thoma, Jr., M.D., Assistant Chief Medical Examiner, Office of the Chief Medical Examiner, Richmond, Virginia. (References available on request).

amounts are apt to produce serious effects. The clinical picture will depend on the localization of the emboli, whether cerebral or coronary, and this to a great extent will be determined again by patient position. In addition to the localizing symptoms, such findings as air bleeding from cuts in the skin, marbling of the skin, and air in the retinal vessels are described. Chase<sup>2</sup> reported a case of cerebral air embolism in which stereoscopic x-rays of the skull taken within three minutes of death following cutting of a pulmonary vein during lobectomy revealed air in the Circle of Willis and the middle cerebral arteries. He also demonstrated experimentally that air acts as an irritant to produce vasospasm, further aggravating the mechanical block and possibly persisting after the air is dissolved.

The technique of post-mortem demonstration of venous air embolism is relatively simple and well known to all practicing pathologists. However, the demonstration of air in the left side of the heart or the coronary or cerebral vessels may be more difficult because much smaller amounts may be present or the possibility may not be thought of. The following technique as done in our office is suggested as a routine for all sudden unexplained deaths as well as in all suspected cases of air embolism. Of course, post mortem gaseous decomposition or gas bacillus infections invalidate all this and must be ruled out by the remainder of the autopsy and culture if necessary. The sternum and costal cartilages are exposed by a simple midline incision starting from below the sternal notch so as to avoid the superficial neck veins and the skin and muscle are carefully reflected laterally. The rib cartilages are cut with rib shears up to but not including the first rib. The freed sternum can then be lifted upward and broken across the angle, exposing the pericardium. The aorta is tightly ligated proximal to the origin of the great vessels and the pericardium is opened and flooded with water to submerge the heart. A single

superficial cut across the coronary arteries, care being taken not to enter the chambers, followed by gentle finger pressure along the course of these vessels will demonstrate air bubbles rising to the surface if present. Then the pulmonary artery, right ventricle, and right atrium can be incised separately and gentle pressure exerted to release any trapped pockets of air. In like manner the left ventricle and auricle are opened. Special care must be taken in examining the brain. Air bubbles can often be observed as they are sucked into the cerebral vessels from the severed neck vessels with traction on the brain during removal. Therefore it is essential that no neck vessels be disturbed beforehand and that the aorta be securely ligated. After removal of the calvarium (caution is necessary here to avoid cutting the underlying brain with the saw), gentle traction on the frontal lobes exposes the internal carotid arteries which are clamped or ligated and then cut proximally. The basilar artery is similarly treated, and the brain removed. If air bubbles are not visible in the Circle of Willis or the immediate branches, the brain is submerged and each clamp removed separately and the vessel end observed for their appearance. It is only by rigid adherence to such a technique and a high index of suspicion in all unexplained deaths that the frequency of such diagnosis as "unknown, pleural shock, vagal reflex, etc.," can be reduced and the true cause sometimes found.

#### **Coffee a Stimulant, with or without Cream.**

You can drink your coffee with or without cream without affecting its stimulating qualities—if you can afford coffee at all at today's prices.

In reply to a query to the Journal of the American Medical Association as to whether black coffee has any more stimulating effect on the nervous system than coffee with cream, a medical consultant wrote:

"No. Black coffee may be a little more concentrated, but the addition of cream does not alter its chemical composition."

## THE MEDICAL SOCIETY OF VIRGINIA

### Report of the Committee on Legislation

Although the recent session of the General Assembly was a stormy one in some respects, the legislation proposed by the Society and supported by its Legislative Committee had rather smooth sailing and came through without too much difficulty. This result was due in part to the subject matter of the several bills presented, and in part by the splendid assistance given your Chairman by Dr. W. C. Caudill in the Senate and Dr. W. C. Elliott in the House.

#### LICENSING OF FOREIGN GRADUATES.

At the annual meeting of the Society in October a special committee, with Dr. John T. T. Hundley as Chairman, was appointed to work with the State Board of Medical Examiners in connection with medical licensure, and particularly the problem of providing standards under which the most competent of the large group of foreign graduates now in this State can be admitted to the examinations given by the Board and to licensed practice upon passing the examinations.

The solution of this problem was made difficult because the schools of graduation of these applicants have not been and cannot be inspected and evaluated by the grading agencies of the professional associations, and by reason of the obviously inadequate medical training given by schools in continental Europe during the past ten years.

Dr. Hundley's committee, working in co-operation with a like committee from the Board of Medical Examiners, gave the problem a great deal of study, and finally, with the assistance of the attorney for the Society, prepared tentative drafts of proposed bills to make a new plan of licensure effective as to these foreign graduates. Copies of these drafts were sent to all members of Dr. Hundley's committee, and the Legislative Committee and to the members of State Board of Medical Examiners, for study and comment. Thereafter a joint meeting of Dr. Hundley's committee and the Examining Board was held in Richmond, at which meeting a number of changes were made in the drafts which had been prepared. At a still later time Dr. Hundley met with the Legislative Committee, at which time some further changes were made, and four separate bills approved for introduction in the General Assembly.

Senator Button, of Culpeper, a very able member of the Senate of Virginia, united with your Chairman and Dr. Caudill as patrons of these bills. They were referred to the Senate Committee on General Laws, were promptly reported by the Committee, and later passed the Senate without opposition. In the House of Delegates they were referred to the House Committee on General Laws, but no action was taken by this committee for several weeks. At Dr. Elliott's suggestion they were referred to a sub-committee for study, and after this sub-

committee had brought in a favorable report, all four bills were reported unanimously by the full committee and went to the House for final consideration. No real opposition developed, and during the last week of the session they were passed without a dissenting vote. This was particularly pleasing to the Board of Medical Examiners as the main bill, which deals with licensure of foreign graduates, required a four-fifths vote to make it effective in time for the June examinations. The bills have been signed by Governor Stanley and are now a part of the medical statutes.

The amendments to the licensing statutes authorize the Board of Medical Examiners to admit to the examinations any graduate of a foreign school which has not been inspected and approved if the Board is satisfied that the candidate's postgraduate training and experience or his professional education, supplemented by two years of internship training in the United States or Canada, is of such duration and character that his qualifications are equal to those required of other candidates. The two years of internship training in this country or Canada must be in a hospital approved for such purpose by the Council on Medical Education and Hospitals of the American Medical Association. One year of postgraduate study in an approved American school may be substituted for one year of internship training. The purpose here is not to open the examinations to incompetent and untrained men, but to those whose competency has been demonstrated by other evidence than inclusion of their professional schools on the A. M. A. approved list. No graduate of any school in this country which does not meet A. M. A. standards can qualify under the amended statutes.

#### THE RESPONSIBILITY IMPOSED ON THE BOARD OF EXAMINERS.

While the Legislative Committee believes that the licensing statutes as now amended are satisfactory, and are in line with those of other States, it realizes that a lax administration of the new licensing requirements by the Board of Examiners can result in the admission of a large number of foreign graduates to Virginia practice whose basic medical education is not of that high quality obtained in Grade A schools in this country. It is well known that for the decade following 1940 the medical schools in continental Europe have been inadequately staffed and poorly equipped, and it is this situation that makes the two-year internship or postgraduate work in this country essential. Unfortunately, the teaching load in our own schools is too heavy to permit postgraduate work for many of these candidates, and this leaves hospital training as the basic supplemental requirement for preparing them for practice. If this training is perfunctory, or is not properly supervised by an interested hospital staff, then the candidates will not be prepared for the examinations or for the practice of medicine.

At one of the preliminary committee meetings Dr. John-B. Truslow, Dean of the Medical College of Vir-



ginia, suggested that the Board require from the approved hospital a fully detailed report on and an evaluation of the candidate's work therein during his residency or internship. If the Board requires and can obtain reports of this nature on these men, and will refuse to open the examinations to candidates whose work does not measure up to high standards, it should be able to confine licensure to applicants whose competency is fully established. The discretion given the Board under the amended statute constitutes a challenge and imposes a responsibility which this Committee is confident it can and will meet wisely. If, however, experience demonstrates that incompetent and untrained men are taking the examination under the statute, it should be repealed in 1956 and a new solution found for the problem.

#### OTHER CHANGES IN THE LICENSING STATUTES.

Other changes in the statutes may be of interest. Under the law prior to these amendments professional schools were required to register with the State Board of Education as having met prescribed standards, which Board then certified the schools to the Examining Board. Hereafter the Examining Board will get its gradings directly from the agencies which inspect and grade the professional schools. This change has long been favored by the State Board of Education. Applicants for the examinations must now be citizens of this country, or have filed a declaration of intention to become citizens. Before taking the examinations evidence of indentity of each applicant is required. Supporting documents in foreign languages must be translated. Reciprocal licensing with foreign countries is no longer permitted. Some increases in the fees for examinations and licensing are authorized, the present fees, which have not been changed for many years, not producing sufficient revenue to meet the expenses of the Board.

Under the provisions of Section 54-276.7 the Board was authorized to grant certificates to certain Federal medical officers permitting them to engage in private practice. As certain of these officers cannot meet the licensing requirements of this State, the Board preferred to give up the authority (which it had never used) rather than to be importuned to grant certificates to men it considered not fully qualified. This change in the law was made at the request of the Examining Board.

The sections defining unprofessional conduct and prescribing the grounds for refusing admission to the examinations and for the suspension and revocation of licenses were rewritten to include in such grounds insanity, engaging in practice under a false name, and impersonating another physician, and to clarify the provisions and place them in more logical order.

#### APPEALS IN SUITS AGAINST THE BOARD.

During the past seven or eight years a number of candidates who had been refused admission to the examinations by reason of their inability to meet statutory requirements have petitioned the courts to require the

Board to open the examinations to them and to award them licenses upon their making passing grades. Unfortunately several of these suits were decided against the Board, and under the law the decision of the circuit or corporation court hearing the matter was not subject to appeal. Although the Board has been successful in defending the last three suits of this nature instituted against it, its members are still of the opinion that the right of appeal should be available to the losing party in suits of this character. The amendment permits appeals in such cases, and thereby conforms the practice to that applicable to similar suits brought against other examining boards. The amendment should eventually change the present confusing situation in which different trial courts reach diametrically opposed but nevertheless final decisions on the same state of facts.

#### BOARD OF EXAMINERS FOR OPTICIANS.

While the foregoing changes in what is usually called the Medical Practice Act came about through bills sponsored by this Committee and introduced by its Chairman and Dr. Caudill, the General Assembly enacted other legislation which directly touches our profession and which should be noted here. At the annual meeting of the Society last October a resolution was adopted approving the creation of a Board of Examiners for Opticians, and your Committee felt obligated to work for the passage of a bill which was introduced for that purpose. The bill became law, and under its provisions the Virginia State Board of Opticians was created to license and regulate this practice. The Board will consist of two physicians who practice Ophthalmology, two Opticians, and one Optometrist. Each physician member will be appointed by the Governor from a list of three names submitted by The Medical Society of Virginia.

#### SPECIAL LICENSING BILL DEFEATED.

About a year ago the Circuit Court of Fairfax County sustained the Board of Examiners in refusing to admit Dr. Leslie Upton, a graduate of Middlesex University School of Medicine, of Waltham, Massachusetts, to the examinations. At the recent session of the General Assembly a bill was introduced which if passed would have required the Board to give the examinations to Dr. Upton and to award him a license upon making passing grades. This was the same kind of special bill which Mr. Stuart Carter got through the Assembly in 1952 for the benefit of Dr. Smith Taylor, another graduate of a sub-standard school. Dr. Taylor has never taken the Virginia examination, and the Upton bill was killed in the General Laws Committee of the Senate.

There were many other matters which demanded the time and thought of the legislative members of the committee during a busy session, but most of these were well covered by the press and will not be discussed here.

We again express our appreciation of the splendid support given us by loyal members of the Society all over our State.

Respectfully submitted,

JAMES D. HAGOOD, M.D., *Chairman*

W. C. CAUDILL, M.D.

W. C. ELLIOTT, M.D.

DEAN B. COLE, M.D.

CARRINGTON WILLIAMS, M.D.

J. EDWIN WOOD, JR., M.D.

FRANK A. FARMER, M.D.

M. S. FITCHETT, M.D.

WALTER P. ADAMS, M.D.

---

## AMERICAN MEDICAL EDUCATION FUND

---

### The Time is Now

A sense of security is a dangerous thing—especially when that security is of the false variety. One of the truly great blessings of living in this nation is the blessing of freedom. And because we have always known freedom, we quite naturally have succumbed to the belief that security would always be ours.

Only now are we awakening to the fact, distasteful though it may be, that there are those who would use our feeling of security as a weapon to destroy completely the very freedom upon which this great nation has been built. They know that to feel secure is a sure way to lose the zest of combat, to refuse the challenge, to dull initiative. They know that it is one sure way to socialism, a way of life from which few return.

The medical profession is today spearheading the fight to keep this country free and to arouse a long sleeping public to the understanding that it must shake off the lethargy of two decades and gird itself for battle. The lay public may not understand technical jargon, but it does recognize leadership.

Leadership of the profession is manifested in the AMERICAN MEDICAL EDUCATION FOUNDATION. The Foundation, realizing that medical education is clinging desperately to its last thin thread of independence, is proving that the "best defense is a good offense."

The Foundation, refusing merely to fight a delaying action, is moving forward—unawed by the dark threat of government subsidy.

How well the Foundation is moving forward can be seen in that nearly \$2½ million were raised during 1953 for the nation's 79 medical schools. This sum was raised through contributions by practicing physicians or business firms which contributed through the National Fund for Medical Education. Despite the fact that this sum represents but a fifth of the total actually needed, it has kept at least one school from closing its doors, and has enabled others to establish new departments, obtain new faculty members, etc.

As of July, 1953, the Foundation, in cooperation with the National Fund, has distributed nearly \$5,000,000 to the 79 schools. And that means that the first round has been won. But—battles such as this are not won in the first round, and frankly, this one has all the earmarks of a long term struggle. However, there is every reason to believe that *if every* physician does his part, the medical schools of America will still be standing free and resolute at the end.

Contribute now to the A.M.E.F.

ROBERT I. HOWARD, *Exec. Secretary*  
*The Medical Society of Virginia*

# Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Medical School Building, University, Va.

Reprints of this and preceding Bulletins may be obtained from this office

May 1, 1954

## Summary of Present Knowledge on Smoking in Relation to Lung Cancer

(Excerpts from a Recent Statement by the American Cancer Society)

The present evidence concerning a possible relationship of smoking to lung cancer comes mainly from three sources:

### 1. *Mortality Reports and Studies of Time Trends*

The age standardized death rates for most sites of cancer have not changed greatly during the last several decades. Male death rates have declined somewhat for cancer of the stomach, skin and liver but have increased somewhat for cancer of the prostate, intestine and pancreas. Female death rates have declined considerably for cancer of the stomach and liver and have increased somewhat for cancer of several sites including ovary and pancreas. However, the single dramatic change is in the standardized death rate of lung cancer among males which rose from 3.6 per 100,000 population in 1930 to 19.5 in 1950.

During the period of time in which lung cancer death rates have been increasing, a great many changes have taken place in our environment and habits of life. Among other changes, there has been a tremendous increase in the use of motor fuel and fuel oil and the per capita consumption of cigarettes. Cigarette smoking as an almost universal habit began some years earlier among men than among women. There has been little change in the consumption of coal in the United States.

### 2. *Laboratory Evidence.*

Recently, laboratory workers have succeeded in producing cancer by applying material condensed from cigarette smoke to the skin of mice. Experiments are now under way to determine what ingredient of cigarette smoke is responsible for this effect. Although these experiments show the presence of a carcinogen, or cancer producing agent, in material condensed from cigarette smoke, no one has yet succeeded in producing epidermoid carcinoma of the lung in mice by exposing them to cigarette smoke. (Most lung cancer in man is of the epidermoid type.) The occurrence of adenomas of the lung has been increased by exposing genetically susceptible rabbits to cigarette smoke.

It is known that soot from coal can produce skin cancer both in man and in experimental animals. It has also been shown that fumes from fuel oil and exhaust fumes from automobiles contain considerable quantities of chemical substances which will produce cancer when smeared on the skin of a mouse.

The laboratory experiments seem to indicate that some chemicals capable of producing cancer must be applied for a considerable proportion of the normal life span of an animal in order to have this effect. Therefore, there is some reason to suppose that a period of many years (perhaps 15 to 40 years) of exposure might be required for a chemical substance to produce lung cancer in man.

### 3. *Smoking Habits in Relation to Lung Cancer.*

A number of investigators have compared the histories of smoking as told by lung cancer patients with the histories of smoking as told by samples of people who do not have lung cancer. In all such studies, a larger percentage of people with a history of heavy cigarette smoking has been found among the lung cancer patients than among the controls. However, the results of these studies differ widely in the degree of association found between lung cancer and history of cigarette smoking.

Although the details varied, essentially the same design was used in all of these studies and many statisticians have doubts as to the validity of this method of obtaining information. Whether or not the general finding of an association between smoking and lung cancer is valid, the degree of association is in doubt because of variations in the findings of different investigators.

### *Discussion*

Although no one of the three types of evidence just described would be sufficient in itself as a basis for positive conclusions, all three taken together create suspicion that cigarette smoking does increase to some degree the probability that an individual



will develop lung cancer. More evidence is needed to establish the degree of the danger, if it is proved to exist.

At the present time, the possibility cannot be ruled out that air pollution from coal and oil fumes is also a factor in the increase in death rates from lung cancer. It is also possible that human lung cancer results from a combination of factors, including smoking and exposure to soot and fumes from coal, oil, and motor fuels.

Constitutional susceptibility — as yet only theoretical — may also favor the occurrence of lung cancer, as it appears to do for some cancers of other sites.

#### *Conclusions:*

- 1) Evidence to date justifies suspicion that cigarette smoking does, to a degree as yet undetermined, increase the likelihood of developing cancer of the lung.
- 2) Available evidence does not constitute irrefutable proof that cigarette smoking is wholly or chiefly or partly responsible for lung cancer.
- 3) The evidence at hand calls for extension of statistical and laboratory studies designed to confirm or deny a causal relationship between cigarette smoking and lung cancer.

## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

---

<i>President</i> .....	MRS. K. W. HOWARD, Portsmouth
<i>President-Elect</i> .....	MRS. MAYNARD EMLAW, Richmond
<i>Recording Secretary</i> .....	MRS. LEE S. LIGGAN, Irvington
<i>Corresponding Secretary</i> —	
	MRS. LEMUEL E. MAYO, Portsmouth
<i>Treasurer</i> .....	MRS. WILLIAM C. BARR, Richmond
<i>Publication Chairman</i>	MRS. WM. S. GRIZZARD, Petersburg

---

### Auxiliary News.

#### DANVILLE-PITTSYLVANIA ACADEMY

The Food Sale held by the Auxiliary on March 5 at the Parish House in Mt. Vernon Methodist church in Danville was quite successful. The sale was held by members of the Auxiliary to raise funds for their Nurses Scholarship Fund (two scholarships are being offered to nurses who wish to further their training in graduate study for six months). The nurses then come back to Memorial Hospital for duty in Danville for a year. The committee working with the Auxiliary in this project was headed by the Ways and Means Chairman, Mrs. M. H. McClintic.

Each member of the Auxiliary supplied food for the sale. It was so successful that we expect to have another sale this Spring.

On Monday, March 22, the Auxiliary had a White Elephant sale for members. Each one furnished two gifts to be auctioned off by Mrs. John L. Clare and Mrs. John W. Hooker. The sale was held in the home of the Auxiliary President, Mrs. Charles A. Easley, Jr. Tea was served. Proceeds from the sale were added to funds for the Nurses Scholarship Fund.

(MRS. DRAKE) SALLY W. PRITCHETT,  
*Publicity Chairman.*

#### ARLINGTON

The Woman's Auxiliary of Arlington held their annual Fashion-show and luncheon, Tuesday, March 9th, at the Washington Golf and County Club, for the benefit of Arlington hospital. Proceeds realized will be applied to the balance due on the Doctors' "Call Board", recently installed by the Auxiliary in the hospital. Fashions were by Lady Hamilton, Inc. of Arlington. There was a capacity crowd and all

in gay attire. Numerous merchants in Arlington donated door prizes and flowers for this festive occasion. Mrs. M. W. Glover, Chairman, and her committee are to be congratulated for the success of this affair. Music was furnished by the Ashton Heights Womans Club (Arlington, Va.), who turned the check over to the hospital also.

The Woman's Auxiliary has been busy with details in connection with helping the Doctors publicize the AAPS Essay Contest. The response has been very satisfying and the prizes offered by the County Medical Society are an inducement to have the high school student participate. Together with the national and county prizes, the students are eligible for a total of \$1,675.00.

Our congratulations to Dr. and Mrs. A. R. MacPherson on the birth of a bouncing boy, "Archibald", recently.

Dr. W. C. Welburn reports that Mrs. Welburn is recuperating nicely from injuries received in an automobile accident while vacationing in St. Petersburg, Fla. recently. Mrs. Welburn is one of the oldest members to the Arlington Auxiliary and all of her friends will be happy to hear that she is expected home in May.

The Woman's Auxiliary of Arlington celebrated Doctors Day on March 30th with radio and television programs on the newscasts throughout the day. March 29th, the Arlington Chamber of Commerce very graciously gave their entire half-hour program to the Auxiliary for the purpose of celebrating Doctors Day. Mrs. Robert H. Mitchell, Publicity Chairman, acted as moderator and also gave the history of this day. Mrs. Lee B. Martin, President, presented the purpose and the beginning of the Arlington Chapter of the Auxiliary. Mrs. Sigmund Newman presented some of the good deeds by the Auxiliary for the benefit of the Arlington Hospital. Mrs. Robert

H. Detwiler acquainted the radio audience with the philanthropic activities of the Auxiliary. We were very happy to have as our guest on this program, Dr. J. Raymond B. Hutchinson, President of the Arlington County Medical Society, who gave a very informative talk and then answered questions asked by Mrs. Mitchell, to better inform the listening audience regarding the Medical Society's purpose in the County. Also for Doctors Day, the members of the Auxiliary collected drug samples from the Doctors offices and gave them to the Arlington Hospital. There was newspaper coverage for this day also, and a picture of Mrs. Martin and Dr. Hutchinson in the paper.

E. MITCHELL

(MRS. ROBT. H. MITCHELL)

*Publicity Chairman*

#### NORFOLK

The March meeting of the Norfolk Auxiliary was a luncheon at the Norfolk Yacht and Country Club honoring the State President, Mrs. K. W. Howard. Mrs. Maynard Emlaw of Richmond, president-elect was guest speaker, speaking on "Why an Auxiliary?"

Mrs. Emlaw stated as a most important purpose of the auxiliary "to extend the aims of the medical profession to all organizations which work toward the advancement of health and health education."

The auxiliary works also "to cultivate friendly relations and promote mutual understanding among physicians' families; to contribute to any endeavor on the request of our medical society, and to assist in the entertainment at all conventions participated in by our medical society.

"For certainly," Mrs. Emlaw continued, "no other group of women share more mutual problems than doctors' wives and they should serve to knit us more closely together.

"The auxiliary is the one organization where we have a complete understanding of each other's difficulties—the late meals, the broken social engagements, and the like."

Mrs. J. R. St. George, president of the Woman's Auxiliary to the Norfolk County Medical Society, announced as its Spring project a luncheon April 21, when Dr. Walter B. Martin, president-elect of the

American Medical Association, as speaker, will explain the president's proposed program.

A meeting for the election of officers will precede the luncheon.

Mrs. St. George called upon members to work with the doctors on the public medical forum, which they are planning.

#### PETERSBURG

The Petersburg Medical Auxiliary honored the doctors by sending to each one a red carnation to be worn on Doctor's Day. Mrs. Garnett Link and Mrs. Francis Payne, Jr., were in charge.

The March meeting of the Auxiliary was held at the greenhouse of a local florist. Each year the members are asked to bring a container and cut flowers are invited to see the Spring flowers. They provided to make arrangements. Cakes and cookies are served. This meeting is looked forward to each year with much pleasure.

MARGARET S. WHITTLE

(MRS. JOSEPH)

#### NEWPORT NEWS-WARWICK

The Woman's Auxiliary to the Newport News-Warwick County Medical Society held its regular luncheon meeting Wednesday, March 24, at 12:30 at the home of Mrs. Russell Buxton on Shore Drive, Christopher Shores. There were thirty-five members present.

Mrs. K. W. Howard of Portsmouth, president of the Woman's Auxiliary to The Medical Society of Virginia, was the guest speaker. Mrs. Howard outlined the work being done by the various auxiliaries in the state.

Mrs. M. R. Emlaw of Richmond, president-elect of the Woman's Auxiliary to The Medical Society of Virginia, was also guest at the luncheon.

Mrs. T. W. Caldrony reported the progress being made in the future Nurses Club.

A contribution of \$75.00 was made to Patrick Henry Hospital for the chronically ill in commemoration of Doctor's Day, March 30. The money will be used to purchase oxygen, intravenous and transfusion equipment at the hospital.

BESSIE G. AMORY

(MRS. GUY C.)



## EDITORIAL

## Blue Cross-Blue Shield Coverage of Mental Illness

DOCTOR SPESSARD'S article in the April issue of the "Monthly" is thought provoking. It should stimulate Blue Cross-Blue Shield people and others who are interested in the adequacy and soundness of non-profit Plans to review the programs with which they are connected and determine whether or not their Plans are keeping up with the changes and accomplishments of psychiatric medical practice. Because recent successes in the field of mental health are so widely recognized, it is all the more important that the still existing limitations in Blue Cross-Blue Shield services available to the mentally ill be correctly interpreted and fully understood by the medical profession as a whole. The progress made by Blue Cross-Blue Shield has been no less phenomenal than the progress in psychiatry, but, as does psychiatry, Blue Cross-Blue Shield has problems that must be overcome before its development along certain lines can be continued.

Psychiatry and Blue Cross-Blue Shield are working toward the same end, the complete well-being of the American public. They both are "modalities", to borrow a term from physical medicine, for the promotion of individual health and of public health. The physicians, the hospital people, and also the public representatives who serve on the Boards of Blue Cross and Blue Shield Plans are quite aware of the unmet needs of those who are mentally ill. As do psychiatrists, Blue Cross-Blue Shield Board members deprecate the continuance of the general public's attitude and dark-age concept that mental illness is related to demoniacal possession. As will be discussed, this unfortunate attitude is impeding their work toward promoting individual and public health in the same way that it makes things more difficult for psychiatrists. It is not misconception concerning mental illness that deters Blue Cross-Blue Shield from increasing further its coverage of services to the mentally ill. There are, however, problems of more specific and practical nature that are deterrents. It is fundamental that Blue Cross-Blue Shield must "sell" and must be able to deliver what it sells. As concerns care of mental illness, Blue Cross-Blue Shield, in many areas of the country, still encounters difficulties in meeting these basic requirements of Plan development.

Blue Cross-Blue Shield, guided by the physicians who serve as its Directors, could devise a health service program which would include only those services generally deemed advisable by the profession but which, nonetheless, would cost a family as much as \$20.00 a month. A rate of that magnitude, of course, would preclude success in enrolling those people of borderline economic status who actually need such a program the most. In the case of services, just as in the case of commodities, successful selling is dependent upon the ability to pay of the potential customer. Accordingly, before Blue Cross-Blue Shield will be able to include more psychiatric services, psychiatry must have further success in devising more rapid, less expensive methods of effective care and must bring the total cost of such care within the reach of the entire Blue Cross-Blue Shield population. Because prepayment, to be truly effective, cannot fall far short of being payment in full and because prepayment cannot reduce the total of medical care expense, Blue Cross-Blue Shield is sincerely hopeful that the average expense of adequate psychiatric services will soon more closely approximate the average expense of other services it provides. At that time it will have greater chance of success in its attempt to sell psychiatric services.

Part of Blue Cross-Blue Shield's problem of selling is the problem of public attitude. Even if someone could afford a \$20.00 a month comprehensive program, he

would have to be educated to *want* to pay that much for it. Blue Cross-Blue Shield can do no more than provide the protection the public wants and is willing, as well as able, to pay for in full. Blue Cross-Blue Shield can help, and does help, practicing physicians in their endeavor to educate the public concerning medical care needs. But Blue Cross-Blue Shield would jeopardize its very existence were it to include services which, even though needed, were not requested by the public and for which the public would be unwilling to pay. And here is where the problem of attitude toward mental illness comes in. Because too many people still consider mental illness somewhat degrading and disgraceful they do not properly evaluate their chance of developing such illness. They accept the possibility of accidental injury and they accept the possibility of socially acceptable diseases and physiological dysfunctions. But they react ostrich-like to the possibility that emotional stresses and strains might become too much for them. They refuse to see themselves in need of psychiatric services; "Maybe some other person, but not me, and I don't want to pay for something I'm not going to use". The individual saying this, of course, is not a patient who has had occasion to receive psychiatric services; he is the so-called "average" individual to whom Blue Cross-Blue Shield attempts to sell its Contract.

There is another reason Blue Cross-Blue Shield has been developing slowly as concerns care of the mentally ill. Not only must it sell its "product", medical care services, but it must also be able to deliver. Quite understandably, a Blue Cross-Blue Shield subscriber expects, when occasion arises, to receive all of the services he needs that are listed in his Contract. Today, however, Blue Cross-Blue Shield could not possibly deliver adequate psychiatric services to every subscriber who might be in need of them. Considering only the relatively short-term psychiatric patients who can be materially aided, there are not enough psychiatrists or sufficient hospital facilities to make it possible for Blue Cross-Blue Shield to live up to a more inclusive Contract. Blue Cross-Blue Shield necessarily must synchronize its Contract not only with the services available in metropolitan medical centers but also with the services available in the average community. This average community supports a hospital of about sixty-five beds and is served by physicians in general practice, few of whom have been able to keep abreast with psychiatry's advances and developments.

As opportunity to sell and to deliver keeps increasing, Blue Cross-Blue Shield will continue to do as much as it can, as soon as it can, to assist in the care of mentally ill subscriber-patients. There has already been notable progress. Twenty years ago but very few of the community hospitals which developed and effected the unique Blue Cross idea were willing to admit psychiatric patients. At that time, care of the mentally ill was generally considered a responsibility of government. Accordingly, psychiatric services were almost completely left out of the first Blue Cross hospital programs. But psychiatry started doing things, and its accomplishments made hospital folks take notice. The idea developed that the State should continue to provide long-term custodial care and that, whenever possible, local communities should provide diagnostic and therapeutic facilities and definitive care of short-term cases. The American Hospital Association, as well as the National Association for Mental Health, for many years has encouraged general hospitals to provide care of the mentally ill, and as more general hospitals developed psychiatric service facilities, Blue Cross increased its provisions concerning these services.

Today, 22% of the Blue Cross Plans in the United States provide the same benefits to the patient for mental illnesses as for other illnesses, when he is admitted to a Blue Cross hospital. These Plans cover about 10 million persons. Also, 40% of the Plans,

covering about 19 million people, provide a somewhat less complete coverage such as regular benefits for a limited number of days, the number of days within the limit, however, usually being 50% to 100% greater than the average number of days hospital stay required by subscriber-patients with organic disease. Accordingly, a total of 62% of the Blue Cross Plans, with a total membership of 29 million, provide fairly substantial benefits for patients with mental illness. Another 8% of Blue Cross Plans offer patients regular benefits for the length of time required to rule out possible existence of organic disease as the basis of the complaints presented.

The present-day status of Blue Cross-Blue Shield coverage of mental illness reflects noteworthy accomplishments during the past twenty years, which in turn have been based upon the accomplishments of psychiatry in reducing the expense of adequate care, in making such care more readily available, and in educating the public to want provisions for care of mental illness. As psychiatry enjoys further success in these areas of its endeavor, Blue Cross-Blue Shield will keep pace by further development of its coverage of mental illness. The future looks bright.

RICHARD J. ACKART, M.D.

*Executive Director*

*Virginia Medical Service Association*

---

## SOCIETIES

---

### **The Williamsburg-James City County Medical Society**

Had their April meeting as Ladies and Guest Night on the 7th. Cocktails were served at the home of Dr. and Mrs. J. E. Barrett, followed by dinner in the Eastern State Hospital Staff dining room. The speaker on this occasion was Mr. Norman Marshall whose subject was Apothecary of Colonial Williamsburg.

### **Danville-Pittsylvania Academy of Medicine.**

At the regular monthly meeting of the Academy on February 10, Dr. Paul Bunce, of the Department of Urology at the University of North Carolina School of Medicine, spoke on the Treatment of Cancer of the Prostate.

At the meeting on March 12, Dr. Eric Schelin of the Medical College of Virginia, Richmond, spoke on Carcinoma of the Cervix.

Dr. J. W. Hooker and Dr. Jefferson D. Beale, Jr., both of Danville, are president and secretary, respectively of the Academy.

### **The Fourth District Medical Society**

Met in Farmville, on the afternoon of April 13 in conjunction with the Staff of the Southside Community Hospital. The President, Dr. A. Tyree Finch of Farmville gave his address. Dr. John

Guerrant of the University of Virginia Medical School spoke on Pulmonary Functions in Certain Lung Diseases and Dr. Thomas H. Hunter, also of the University, spoke on Some Factors Involved in the Choice of Anti-Biotic Therapy. Following a short business meeting by the Society, Cocktail Hour was held at Hotel Weyanoke, followed by dinner at the Hotel as guests of the Hospital Staff.

### **Roanoke Academy of Medicine.**

The meeting of the Academy on April 5, was conducted by the Staff of Gill Memorial Hospital in the Ballroom of Hotel Roanoke at 8:00 p.m. Speakers on this occasion were Dr. Paul Hawley, Director, American College of Surgeons, on "Professional Freedom in Medical Practice", and Dr. Winchell McK. Craig, Professor of Neurosurgery of the Mayo Clinic. His address was on 'Intraspinal Tumor, and the Part They Play in General Diagnosis'.

### **The Warwick-Newport News Medical Society**

Had its regular meeting on April 13 in the Coca Cola Building in Newport News. The speaker was Dr. A. R. Coppola of Newport News, whose subject was "Neuro-Surgical Aids in Diagnosis". Refreshments followed.

Dr. William A. Read is president and Dr. T. Ashton Carmines secretary-treasurer.



## NEWS

### Calendar of Coming Events

*Virginia Academy of General Practice*—Richmond, May 4-7

*Virginia Society of Ophthalmology and Otolaryngology*—Old Point Comfort, May 7-8

*Virginia Academy of Science*—Charlottesville, May 13-15

*American Gynecological Society* — Hot Springs—May 20-22

*Virginia Heart Association*—Hotel Jefferson, Richmond—June 13.

*American Medical Association* — Annual Meeting—San Francisco, June 21-25

*American Congress of Physical Medicine and Rehabilitation*—Washington, D. C., September 6-11

*The Medical Society of Virginia* (Annual Meeting)—First Interstate Scientific Assembly—Hotel Shoreham, Washington, D. C., October 31-November 3.

### Session on Legal Medicine at San Francisco.

In recognition of the growing importance of the many situations in which medicine may contribute to a clarification of medicolegal issues and of the interest and concern of physicians in such situations, there will be presented at the San Francisco meeting of the American Medical Association in June a Session on Legal Medicine in the Section on Miscellaneous Topics of the Scientific. This Session will be held under the immediate sponsorship and direction of the Committee on Medicolegal Problems which has arranged an informative program to include discussions on topics of practical value to practitioners who, whether they like it or not, will some day become personally concerned in a medicolegal involvement. The following papers will be presented:

*Advice to the Medical Witness*—W. I. Gilbert, Esq., President, Los Angeles Bar Association

*Malpractice, an Occupational Hazard*—Louis J. Regan, M.D.

*Medicolegal Problems Related to Sterilization, Artificial Insemination and Abortion*—J. W. Holmway, Jr., Esq., and Edwin J. Holman, Esq.

*Prevention of Transfusion Accidents*—Alexander S. Wiener, M.D.

*Legal Aspects of Medical Partnership*—George E. Hall, Esq.

*Trauma, Stress and Coronary Thrombosis*—Alan R. Moritz, M.D.

This Session represents a practical and somewhat new approach to a solution of some of the situations in the medicolegal field that have caused, or that in the future may cause, uncertainty and possible embarrassment on the part of the physician. The program has been carefully arranged with that objective in mind and a physician will find much of value in the six papers. The meeting will be held on Thursday morning, June 24, in the White Room of the Masonic Temple located at 25 Van Ness Avenue and will begin at 9:00 a.m. and conclude at 12:00 noon.

### The Virginia Society of Ophthalmology and Otolaryngology

Is holding its annual meeting at the Chamberlin Hotel, Old Point Comfort, Virginia, on May 7 and 8. There will be recognition of members associated with the Society for twenty-five or more years. Dr. Fletcher Woodward of Charlottesville will be the guest of honor and Dr. Banks Anderson of Duke University, Durham, N. C., will be the guest speaker. His subject will be "Ocular Manifestations of Systemic Disease".

Dr. Peter N. Pastore and Dr. L. Benjamin Shepard, both of Richmond, are president and secretary of the Association, respectively.

### The Virginia Pediatric Society

Held a most interesting meeting at the Homestead Hotel, Hot Springs, Virginia, on February 26 and 27, under the presidency of Dr. T. Stanley Meade of Richmond. The guest speakers who were on both dates of the meeting were Dr. Joseph Stokes, Jr., of the Department of Pediatrics of the University of Pennsylvania, Philadelphia, Dr. Lawson Wilkins, Associate Professor of Pediatrics, The Johns Hopkins Hospital, Baltimore, and Dr. Waldo E. Nelson, Temple University and St. Christopher's Hospital for Children, Philadelphia. Members of the society who presented papers were Dr. Ralph Ownby of the Medical College of Virginia, and Dr. James B. Wood, Jr., of the University of Virginia.

Several exhibitors at the meeting arranged for social events for the doctors and their wives.

Eleven new members were elected and the follow-

ing officers were named: President, Dr. T. J. Humphries of Roanoke; vice-president, Dr. F. Read Hopkins of Lynchburg; and secretary-treasurer, Dr. A. Page Booker, Charlottesville, succeeding Dr. William Grossmann of Petersburg.

### **A Conference on Therapy**

Was held at the University of Virginia on April 23. At the morning session, Management of some Phases of Cardiovascular Disease was discussed, and after lunch, the subject was Management of Obstetric and Gynecological Problems. In addition to several speakers from the two departments at the University, the guests were Dr. Edward D. Fries, Adjunct Professor of Medicine at Georgetown University School of Medicine, Washington, and Dr. H. Hudnall Ware, Jr., Professor of Obstetrics and Gynecology at the Medical College of Virginia, Richmond.

### **To Be Honored by Medical College of Virginia.**

Dr. James Loving Hamner, rural practitioner of Mannboro, former president of The Medical Society of Virginia and a member of the State Board of Health, is one of two alumni who will receive honorary degrees at the Medical College of Virginia Commencement on June 1.

The other doctor to be honored is Dr. Randolph Lee Clark, Jr., of the class of '32, prominent surgeon of Houston, Texas.

### **Inaugural Address to Be Broadcast.**

Even if you cannot attend the American Medical Association's 103rd Annual Meeting, June 21-25, you will be able to hear the president's inaugural address broadcast directly from the ballroom of the Palace Hotel in San Francisco. The remarks of President-Elect Walter B. Martin will be broadcast on a nationwide radio network Tuesday evening, June 22. The program will be telecast locally. Immediately following the broadcast, a reception and ball honoring Dr. Martin will be held.

### **The Virginia Academy of General Practice**

Is holding its fourth annual scientific assembly at the Jefferson Hotel, Richmond, May 5, 6 and 7. On the 5th, the Virginia Chapter, American College of Chest Physicians meets in the morning, and the Virginia Diabetes Association will have its session in the afternoon. The Virginia Academy of General Practice will have its meeting of the Board of Direc-

tors that evening and the scientific sessions on the following days. Attractive entertainments have been arranged for the members and for the ladies accompanying them. A number of technical and scientific exhibits will add to the interest of this meeting.

### **The American Congress of Physical Medicine and Rehabilitation**

Will hold its annual scientific and clinical session September 6-11, 1954 inclusive, at the Hotel Statler, Washington, D. C. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

In addition to the scientific sessions, annual instruction seminars will be held, open to physicians as well as to therapists who are registred with the American Registry of Physical Therapists or the American Occupational Therapy Association.

Full information may be obtained by writing to the executive offices, American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago 2, Illinois.

The Annual Essay Award contest, sponsored by the Congress, will be open to graduate students in the pre-clinical sciences and graduate students in physical medicine and rehabilitation. Manuscripts must be in the office of the Congress not later than June 1, 1954. For details, write to the executive offices.

### **News from State Health Department.**

Dr. T. H. Valentine, medical director of the Brunswick-Greenville-Mecklenburg Health District, died April 3. Dr. Valentine was the oldest public health official in point of service in Virginia. He will be greatly missed in the public health program of the State.

Dr. R. D. Wallace has been appointed Director of the Bureau of Dental Health of the State Health Department. He will begin his service on May 1. Dr. Wallace is replacing Dr. W. H. Rumbel who died last November.

### **The J. Shelton Horsley Memorial Lectureship,**

Established by Dr. Guy W. Horsley in 1947 in honor of his father, each year presents an outstanding speaker in the field of Surgery at a stated meeting of the Richmond Academy of Medicine in April. The address this year was given on April 13 by Dr.

George T. Pack, Clinical Professor of Surgery at New York Medical College and attending Surgeon-in-Chief of Gastric and Mixed Diseases at Memorial Hospital, New York. His subject was "Management of Pigmented Moles and Malignant Melanoma."

### Two Recipients of the Markle Fund.

Among the twenty-five appointments of faculty members of medical schools in the United States and Canada to be granted recognition for their research work by the Markle Fund are two from Virginia Medical Schools—Dr. Robert Q. Marston at the Medical College of Virginia, Richmond, and Dr. Oscar A. Thorup, Jr., of the University of Virginia School of Medicine, Charlottesville. The grant is for \$6,000 annually for five years to the schools named where the doctors will teach and carry on their research. Dr. Marston's interest is internal medicine, and Dr. Thorup's is hematology and cardiology.

### The Virginia Heart Association

Will meet at the Jefferson Hotel, Richmond, on May 13, at 2:30 p.m. The speaker is to be Mr. Blake Cabot, author of "The Motion of the Heart—The Story of Cardiovascular Research", whose topic will be "Telling the Cardiovascular Research Story".

Under the auspices of American Heart Association, Mr. Cabot visited and talked with hundreds of research scientists in hospital and medical-school laboratories throughout the United States. He will relate some of the behind-the-scenes accounts of his observations, which afforded intimate close-up views of how experiments are conducted, how the scientists learn from them, and how this new knowledge applies to the treatment of cardiovascular diseases.

### Postgraduate Credit for Academy Members.

The American Academy of General Practice has given official sanction by its Commission on Education for *Formal Postgraduate Credit* to Academy members who attend the first Interstate Scientific Assembly of The Medical Society of the District of Columbia and The Medical Society of Virginia. This is to be at the Shoreham Hotel in Washington October 31-November 3, 1954.

### The National Tuberculosis Association

Will hold its 50th Anniversary Meeting on May 17-21 in Atlantic City. The Ambassador, Chelsea, and Ritz Carlton Hotels will be used.

Beginning Monday morning, May 17, there will

be medical sessions on basic considerations in tuberculosis; nontuberculous pulmonary diseases; environmental considerations in tuberculosis; laboratory developments; surgery in the treatment of tuberculosis, and nonpulmonary tuberculosis, and panel discussions on the epidemiology of cancer of the lung, the treatment of tuberculosis in infants and children, and changing concepts and modern treatment of tuberculosis. There will also be a number of small seminars on various aspects of tuberculosis treatment and research.

The general theme of the anniversary meeting will be "The Challenge of the Future." There will be a number of general sessions, the first of which will be Monday afternoon when the program will be built around "The People Against Tuberculosis—in Medicine, in Government, in Voluntary Agencies."

### Martha Jefferson Hospital Enlarged.

The Martha Jefferson Hospital, Charlottesville, has been enlarged by the addition of a new \$1,105,000 wing which was dedicated on March 20. The new wing has 28 double rooms for patients, a kitchen, laundry, four operating rooms, new maternity department and nursery, and new facilities for the radiology department. Dr. T. H. Daniel, treasurer of the hospital's board of trustees, was the main speaker at the dedication.

The old wing which was completed in 1929 is to be completely remodeled.

### Dr. D. Lane Elder,

Hopewell, mayor of that city for nearly thirty-four years, has announced that he will quit City Council when his present term expires September 1.

### Addition to List of Licensees.

Dr. Jacob S. Rand, Far Rockaway, New York, was also licensed by the Virginia State Board of Medical Examiners at its examinations of December 28, and should be added to the list published in the February MONTHLY.

### Graduate Lecturers at University of Virginia School of Medicine.

In addition to lectures listed in the February *Monthly*, an addition and a change are reported for May:

*Thursday, May 6 at 5:00 p.m.*—Dr. Stewart Wolf, Professor of Medicine at University of Oklahoma School of Medicine, on "Stress and Human Gastric Function", and



*Wednesday, May 12 at 8 p.m.*—Dr. Paul Aebersold, Director of Isotopes Division, Oak Ridge (Tenn.) Institute of Nuclear Studies, on "Radioactive Isotopes: Cancer Research, Diagnosis and Therapy".

All Virginia physicians are welcome and are invited without a fee.

**Dr. R. S. Griffith,**

Ninety-three year old physician of Waynesboro, has been honored by the local firemen of the Waynesboro Fire Company by being given a plaque as a tribute to his long service. He is a veteran of the bucket brigade days, having first joined the fire fighting unit in the former Basic City in 1892.

**For Sale:**

40 bed, well equipped, small town hospital. Ad-

dress Physician's Hospital, Incorporated, Warrenton, Virginia. (Adv.)

**Doctor's Office:**

Ideal location for physician, outside of Washington, in expanding community of Alexandria, Virginia. Complete 5-room house available for use as office in area needing services of a physician. Owners willing to assist doctor to get started. Telephone Mr. Charles Gerstein for appointment, TE-6-9378. (Adv.)

**For Sale—**

One Coreco Color Camera with x-rays, gynecology, body surface and specimen attachments. Same as new. Original cost \$790. Will sell for \$490. W. L. Davis, M.D., 87 Twenty-ninth Street, Newport News, Va. Telephone 2-4532. (Adv.)

---

## OBITUARIES

---

**Dr. H. Stuart MacLean,**

Richmond, died April 2 in a local hospital, after having been in bad health for a couple of years. He was eighty years of age and came to this country from Inverness, Scotland, about the turn of the century. He graduated in medicine from Long Island College of Medicine in Brooklyn in 1895 and, shortly after completing his internship in Brooklyn, located in Richmond. With Dr. Robert C. Bryan, he founded Grace Hospital in Richmond in 1912, and was on its surgical staff until 1934. He was also chief medical officer of the Virginia Electric and Power Company, which position he held to time of his retirement. He served for a time on the faculty of the Medical College of Virginia and was a member of a number of medical organizations and was an elder in the Presbyterian church. His wife, a daughter and son and two grandchildren survive him.

**Dr. Lomax Gwathmey,**

For many years prominent surgeon of Norfolk and

president of The Medical Society of Virginia in 1906, died March 22, at his home at Back Bay, near Virginia Beach, to which place he moved upon his retirement from active practice several years ago. Dr. Gwathmey was born November 5, 1869 and studied medicine at the University of Virginia from which he graduated in 1889. He also studied at Columbia University in New York and in Vienna and Heidelberg and on his return in 1895, he located in Norfolk where he became one of its prominent surgeons. In World War I he served in France and was invalided home in December 1918 and discharged early in 1919 with the rank of major. He was a past resident of the Norfolk County Medical Society and a member of various other medical organizations. His wife whom he married in August 1892 survives him.

**Dr. Thomas Henry Valentine,**

Lawrenceville, died April 3, shortly after he suffered a heart attack. He was seventy-five years of

age and studied at the former University College of Medicine, Richmond, from which he graduated in 1901. He was perhaps the oldest public health official in point of service in Virginia, having served continuously in health work since 1908. Under his leadership, the health service had grown from a one room office in his section to a point where three counties in that section have eight nurses, four sanitation officers and five clerks. He was a Mason and Life Member of The Medical Society of Virginia. A daughter and son survive him, his wife having died in April 1953.

#### Dr. Charles R. Woolwine,

Health officer at Virginia Polytechnic Institute in Blacksburg from 1928 to 1951, died at a Richmond hospital March 19. Upon retirement, he had lived on a farm near Sealston in King George County. Dr. Woolwine was seventy-three years of age and a graduate of the Medical College of Virginia in 1908. He was engaged in practice with coal mine companies before locating in Blacksburg. He had for many years been a member of The Medical Society of Virginia. His wife and a sister survive him.

#### Dr. Louis S. Leo,

Norfolk, a specialist in eye, ear, nose and throat work and in plastic surgery, died March 17 in a Norfolk hospital, following a heart attack. He was fifty years of age and a graduate in medicine from the Medical College of Virginia in 1927. He later took postgraduate work at the University of Berlin and at the University of Vienna. He was a fellow of the American College of Surgeons as also of The Medical Society of Virginia and several other organizations. During World War II, he was a flight surgeon. He is survived by his wife and two daughters.

#### Resolution on the Death of Dr. Julius Dreher Willis

WHEREAS, it is with profound sorrow that the Roanoke Academy of Medicine records the death of its member and Past President, Dr. Julius Dreher Willis, which occurred on January 29, 1954, at the age of 68. We wish to extend to his family our deepest sympathy. His passing will not only be a great loss to his family, but also to the medical profession of this and surrounding communities, and to the numerous and genuine friends he has made through an active, devoted and fruitful career as physician, counselor, friend and civic spirited citizen.

BE IT RESOLVED, that a copy of this resolution be spread

upon the minutes of this meeting of the Roanoke Academy of Medicine, and that copies be sent to the *Virginia Medical Monthly*, and to the American College of Physicians, and to the family.

IRA H. HURT, M.D.

S. BEVERLY CARY, M.D.

FRANK A. FARMER, M.D.

*Committee.*

#### Dr. Nathaniel F. Rodman.

The following resolutions were presented to the regular meeting of the Norfolk County Medical Society on March 1, 1954:

The death of Dr. Nathaniel Fulford Rodman, on January 14, 1954, deprived the Norfolk County Medical Society of a greatly beloved member.

Dr. Rodman, the son of the late Colonel and Mrs. William Blount Rodman, was born in Washington, North Carolina in 1891. His early education was received at Oak Ridge Institute and later at the University of North Carolina. Graduating from Jefferson Medical College in 1914, he took postgraduate training in the Presbyterian and Children's Hospital in Philadelphia and, soon after completing these internships, he accepted a commission in the United States Army Medical Corps where he served for the duration of World War I.

In 1918 Dr. Rodman returned to Norfolk and resumed the practice of medicine and surgery. This he continued until ill health caused him to retire, three years ago.

He was an active member of the staff of Leigh Memorial Hospital, De Paul Hospital and the Norfolk General Hospital. For years he was a member of the Executive Committee of the Norfolk General Hospital, serving diligently on many important committees. For a term of one year he was president of this hospital.

Dr. Rodman's greatest interest was in the Norfolk County Medical Society, serving as president in 1943-1944. He was also a member of The Medical Society of Virginia, the American Medical Association, and a fellow of the Southeastern Surgical Congress.

Dr. Rodman had a most attractive personality, being cheerful, honest, and conscientious. Modesty, sympathy and kindness were other characteristics which endeared him to his many friends and patients. He had, at times, a decided opinion of his own which never interfered with his popularity, as he was tolerant of the ideas of others. He made many friends and most of them were permanent.

Flowers were his hobby. Many pleasant hours were spent in his garden.

WHEREAS the loss of Nat Rodman will bring great sorrow to his family, his friends and his patients,

BE IT RESOLVED, that this resolution be accepted and placed in the minutes of this Society, and,

BE IT FURTHER RESOLVED, that a copy of this resolution be sent to Mrs. Rodman.

(Signed) B. L. PARRISH

P. E. THORNHILL

A. B. HODGES, *Chairman*



## pedigree

Only a flawless pedigree — a long and illustrious ancestry of purebreds — can produce a champion show dog.

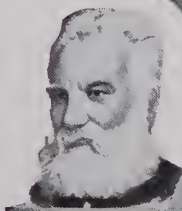
Only **audivox** in the hearing aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, which were furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.

Pedigreed in its field, **audivox** successor to Western Electric Hearing Aid Division, brings the boon of better hearing, and its enrichment of living, to thousands. With the magical modern transistor, with scientific hearing measurement and scientific instrument-fitting, serviced by a nation-wide network of professionally-skilled dealers, **audivox** moves forward today in a proud tradition.

**TO THE DOCTOR:** Send your patient with a hearing problem to a career Audivox and Micronic dealer, chosen for his interest, integrity and ability. There is such an Audivox dealer in every major city from coast to coast.



Audivox new all-transistor model 71 hearing aid



Alexander  
Graham  
Bell

# audivox

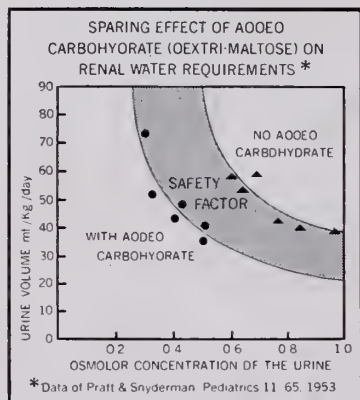
Successor to *Western Electric* Hearing Aid Division



# DEXTRI-MALTOSE

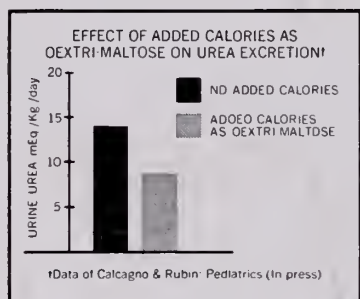
*formulas*

**provide important physiologic safeguards**



**Added renal safety.** When the effective carbohydrate, Dextri-Maltose®, is added to cow's milk formulas, the infant's water requirements are reduced. This provides an added margin of safety against dehydration. In addition, the load on the water excretory capacity of the infant's immature kidneys is reduced.<sup>1,2</sup>

The margin of renal safety is especially important since various stresses and handicaps have been shown to influence the infant's fluid balance and renal capacity.<sup>1,3,4,5</sup>



**Better nitrogen retention.** The addition of adequate carbohydrate (Dextri-Maltose) to cow's milk formulas increases the infant's nitrogen retention and promotes the efficient use of nitrogen for growth,<sup>2</sup> causing a reduction in the excretion of urea and lightening the load on the infant's kidneys.

Ample carbohydrate is provided in a milk and water mixture by inclusion of 4 to 5% of Dextri-Maltose—or 1 tablespoonful to each 5 or 6 fluid ounces of formula.

With a record of forty-three years of outstanding clinical success, no other carbohydrate has earned such world-wide acceptance and confidence in its constant dependability as Dextri-Maltose.



1. Pratt & Snyderman: Pediatrics 11: 65, 1953; 2. Calcagno & Rubin: Pediatrics (in press); 3. Calcagno, Rubin & Weintraub: J. Clin. Investigation 33: 91, 1954; 4. Caake, Pratt & Darrow: Yale J. Biol. & Med. 22: 227, 1950; 5. Gamble: J. Pediatr. 30: 488, 1947; 6. Rappaport: Am. J. Dis. Child. 74: 682, 1947.

## DEXTRI-MALTOSE

the carbohydrate of choice for infant formulas

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

**MEAD**

# VIRGINIA MEDICAL MONTHLY

## *Contents*

- Clinical Significance of Endometriosis, Eugene S. Groseclose . . . 253  
Primary Melanoma of the Ileum, Edmund M. Chitwood, Jr.  
and George B. Guarino . . . 259  
Clavicular Changes Associated with Secondary Hyperparathyroidism, Robert  
L. Friedman, Simon Russi and William F. Barry, Jr. . . . 261  
Retroversion of Uterus, John M. Nokes . . . 268  
Rupture of an Aneurysm of the Circle of Willis Complicating Pregnancy,  
George Speck . . . 270  
Pruritus of the Vulva, C. L. Riley . . . 273  
Clinicopathological Conferences, Gordon Hennigar and Wm. R. Kay . . . 275

(Continued on page 6)

LIBRARY  
JUN 11 1954  
DEPARTMENT  
OF MEDICINE

SLEEP THAT MAKES THE DARKNESS BRIEF

# 'Seconal Sodium'

(Secobarbital Sodium, Lilly)

**rapid action, short duration—patient awakens refreshed**



In 1/2, 3/4, and 1 1/2-grain pulvules

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

provides  
relief from  
a wide variety  
of seasonal  
allergies

BENADRYL Hydrochloride  
(diphenhydramine hydro-  
chloride, Parke-Davis)  
is available in a variety of forms  
—including Kapseals,<sup>®</sup> 50 mg.  
each; Capsules, 25 mg. each;  
Elixir, 10 mg. per teaspoonful;  
and Steri-Vials,<sup>®</sup> 10 mg. per cc.  
for parenteral therapy.



# Virginia Medical Monthly

Vol. 81, No. 6  
WHOLE No. 1224

RICHMOND, VA., JUNE, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## CLINICAL SIGNIFICANCE OF ENDOMETRIOSIS\*

EUGENE S. GROSECLOSE, M.D., F.A.C.S.  
Lynchburg, Virginia

Endometriosis is now recognized as one of the most frequent causes of pelvic disease in women, as manifested by an ever increasing volume of clinical reports devoted to this condition.

The publication of the first of Sampson's classic articles on Endometriosis in 1921 intensified the investigation of this disease, particularly its histogenesis. Sampson's classical description of endometriosis as "the presence of ectopic tissue which possesses the histologic structure and function of the uterine mucosa" is generally accepted, and he includes the abnormal conditions which may result not only from the invasion of organs and other structures by this tissue, but also its relation to menstruation.

In a recent review of the literature on Endometriosis by Ware, he states that since Cullin's report on a case of adenomyosis of the uterus in 1895 and Russell's case of aberrant portions of Müllerian duct found in an ovary in 1897, an extensive investigation of this subject by many workers emphasizes the clinical importance of endometriosis as a cause of disability in the female, as well as the variability of the clinical manifestations of this disease, the location, symptomatology, relation to sterility and its treatment.

### HISTOGENESIS

Endometriosis may be of two types: (1) the internal, or direct, in which the ectopic mucosa, situated within the uterine wall or tubal wall is continuous with the mucosa lining these organs; (2) the external, or indirect, endometriosis in which the ectopic mucosa has the same histologic structure as that of the internal type, but is not continuous with usually situated Müllerian mucosa. Internal endometriosis refers to adenomyosis of the uterus or the presence of endometrial glands within the mus-

cular wall of the uterus, and connected with the lining endometrium.

There are several theories as to the origin of external endometriosis.

I. The Transtubal Implantation, or the retrograde menstruation, theory of Sampson, in which transtubal regurgitation of menstrual blood and endometrial particles implant and grow on the ovary and pelvic peritoneum. This theory, however, does not explain the presence of endometrial tissue found outside the pelvis or such remote sites as the lungs.

II. Theory of Embryonic, or Fetal Rests, advocated by Russell, in which the suggested origin of these glands was from cell rests of the Müllerian duct. Today, we find few advocates of this cell rest theory.

III. Theory of Metaplasia of Epithelium of the Pelvic Peritoneum, as suggested by Iwanoff and Meyer, and supported by Novak. Under some endocrine or inflammatory stimulus the peritoneal cells or germinal epithelium cells become differentiated and invaginated to resemble tubal or uterine mucosa, most likely the result of hyperestrinism.

IV. The Theory of Lymphatic and Vascular Dissemination, suggested by Halban in 1924, in which desquamated endometrial cells at the time of menstruation are disseminated by way of the lymphatics to various parts of the pelvis. Although this vascular and lymphatic theory has few supporters, it is the only theory that will adequately explain the presence of endometrial glands in lymph nodes and as metastatic tissue in the lungs.

According to Gardner, Greene and Ramsey, no single theory of histogenesis necessarily accounts for all cases of endometriosis, even though all cases of spontaneously occurring endometriosis in every known location can be explained by the celomic metaplasia theory.

### PATHOLOGY

The pathology of endometriosis represents the result of the growth and activity of endometrial glands

\*Presented at the annual meeting of The Medical Society of Virginia in Roanoke, October 18-21, 1953, as one of the papers in the Obstetrical and Gynecological Symposium.

which have the same histologic structure and function as the glands of the uterine mucosa. The physiologic response of these misplaced glands to ovarian hormone stimulation causes cyclic bleeding and, with no avenue of escape, the blood accumulates as pelvic hematomata of varying sizes. Not only do adhesions form from the cyclic bleeding and healing process, but active invasion of the endometrial process into the walls of the involved organs occurs.

Although endometriosis has in the past been considered a benign disease, clinically and microscopically endometriosis appears to act like a cancer, though benign by microscopic criteria, it grows by direct extension, implantation and probably spreads by lymphatic and venous channels, as pointed out by Scott. He feels that external endometriosis has the same potential for malignant change as does normally located endometriosis. To substantiate this theory, Scott further pointed out that the literature contains 12 cases of ovarian carcinoma, which by conforming to Sampson's criteria, almost certainly arose from endometriosis.

As to the location of endometrial lesions, the involvement of the ovary is the most frequent, the utero-sacral ligaments the next, and the recto-vaginal septum the third most frequent site. The utero-vesical peritoneum and broad ligaments are also frequently involved.

The associated pelvic pathology in order of frequency are: (1) uterine myomas, (2) uterine retro-displacement, (3) endometrial hyperplasia, (4) simple follicle cysts of the ovary, (5) post-operative adhesions, (6) luteum cysts of the ovary, and (7) chronic salpingitis. A recent case of the author's in a young white woman 22 years of age presented this entire list of associated pathology, with the exception of uterine myomas.

#### INCIDENCE

*Endometriosis is a disease of young women of child-bearing age.* Although it is usually considered as a disease occurring more frequently in women over 30 years of age, it is reported with increasing frequency in younger women. Greenblatt states that this condition is one of the most common pelvic lesions found at operation in women during active menstrual life and occurs more frequently in private practice than those in a general hospital population. Fallon in 1946 reported that in his 225 cases of external endometriosis, 4 per cent were under 20

years of age, and one of these patients was only 13 years of age. McDonald reported a case of endometrial cysts of the posterior vaginal vault in a girl of 16 years. Holmes reported an incidence of endometriosis in 2.5 per cent of his patients between the ages of 20 to 23, 8.7 per cent were under 28 years of age, while 51.2 per cent were between 29 and 39 years of age.

The clinical frequency of endometriosis, as encountered in gynecological practice, is now being stressed in modern medical literature. The true incidence of endometriosis is difficult to determine, but, as pointed out by Tyrone, this condition is increasing in the colored race. He found that the incidence was 5% on the gynecological service at Charity Hospital, as compared to 17% at the Ochsner Clinic the same year. Failure of conception during the younger married years because of economic reasons, maladjustment, increased tension of modern living, all of which lead to unsatisfactory sex life in many patients, have all been mentioned as contributing factors in delaying pregnancy, and therefore contributing to the development of endometriosis. Meigs found endometriosis in 32.2 per cent, Sampson 21.8 per cent, and Holmes 26 per cent of all abdominal gynecologic operations. On the basis of these figures, one may expect to find endometriosis in 1 out of every 4 patients operated upon for some pelvic pathology. Fallon states that there were 240 patients with microscopically verified endometriosis, as compared with only 114 with acute appendicitis. It should be emphasized that the variable clinical manifestation of this disease, and its widespread locations, demonstrates the necessity of constantly bearing this condition in mind when observing female patients during the child-bearing age. Endometriosis is encountered in many fields of medicine and not all of its symptoms are pelvic. As emphasized by Fallon in a review of 400 cases, the presenting symptoms were: upper abdominal, psychiatric, dermatologic, obstetric, urologic, and proctologic. The general practitioner is likely to encounter this disease as one of the most frequent causes of pelvic pain, dysmenorrhea, and/or sterility.

#### SYMPTOMATOLOGY

The symptoms of endometriosis are variable, depending upon its location and extent. In most cases the symptoms are chronic and are manifested by a month by month cumulative increase in some men-

strual-linked phenomenon, usually, and most frequently, *pelvic pain*. It is generally considered that the cardinal symptoms of this disease are: (1) dysmenorrhea, (2) dyspareunia, (3) relative sterility, (4) menstrual defecation pain, and (5) the pathognomonic sign, the hard, fixed nodule felt by recto-vaginal palpation of the utero-sacral ligaments or peritoneum of the posterior vaginal vault. Of these diagnostic symptoms and signs, the fifth is the most important. When a definite nodule or cluster of nodules is palpated in the utero-sacral ligaments, with tenderness and induration, there is little doubt that pelvic endometriosis exists in most cases. As to the diagnostic significance of dysmenorrhea, most authors agree that this symptom alone is of no great significance, unless it is combined with positive palpatory findings, as previously described. It is generally agreed that there are many who make the presumptive diagnosis of endometriosis in many cases of severe dysmenorrhea, apparently overlooking the great frequency of uncomplicated primary dysmenorrhea.

Other symptoms frequently presented by these patients are, in addition to the above, menorrhagia, metrorrhagia, pelvic pressure, pain in thighs or inguinal regions, sacral back pain, gastro-intestinal symptoms, renal pain, upper abdominal reflex pain, constipation and obstipation, headache, nervousness, bladder symptoms, and elevation of temperature and leukocytosis.

*Sterility is a common symptom or complication of endometriosis.* The association of endometriosis and sterility has been emphasized by many observers, the incidence varying between 20 and 60%. Meigs states that endometriosis frequently causes infertility and that the general observation that ward and clinic patients rarely have endometriosis is based upon the fact that this group of patients are the ones that marry early and have children during early married life, have developed a secondary sterility due to a growing endometriosis. This seems to emphasize the importance of endometriosis in the production of relative sterility, both primary and secondary. Other clinical manifestations of this disease are now recognized.

Recently two significant papers on the effect of endometriosis on pregnancy have been published. Scott in 1944 reported two cases of endometriosis which necessitated laparotomy during pregnancy. Stone in 1937 reported a case of rupture of the

pregnant uterus due to adenomyosis, and Sackett in 1948 reported a case of severe uterine hemorrhage due to adenomyosis which necessitated hysterectomy following cesarean section.

#### DIAGNOSIS

The importance of a careful history and thorough pelvic examination in the early diagnosis of endometriosis cannot be stressed too strongly. Combined rectal and pelvic palpation with inspection of the cervix and vagina are of great importance as a diagnostic procedure. Culdoscopy is of minor importance and indeed may be a dangerous procedure. The most frequently encountered lesions of pelvic endometriosis are the so-called "chocolate cysts", the "blue berry" spot, the endometriosis of the recto-vaginal septum and the utero-sacral ligaments. Fallon states, however, that less well known manifestations are as common as the above lesions, these being the thin plaques of an old-blood-like material densely adherent to the peritoneum, known as "brown spatter," and the "red roughening" consisting of fiery red granules with fibrin-like fronds. Less frequently, small colorless peritoneal cysts, white areas of peritoneal sclerosis or the small chocolate cysts of about 1 mm. are encountered.

As stated above, the clinical manifestations and location of this disease are variable. Fitzgerald and Kuhn recently reported a case of endometriosis of the bladder and a review of the 64 reported cases. The symptoms of bladder pain, frequency and urgency with or without hematuria, were all exaggerated during menstruation and in these cases, a palpable mass painful on pressure and a typical cystoscopic picture, were present. According to Siddall and Mack, most cervical endometriosis is secondary to involvement of the recto-vaginal septum and direct extensive into the cervix from the uterine corpus has never been reported. They report four cases of primary endometriosis of the cervix, which is rare, and they feel that the most likely origin of this lesion is the transplantation of endometrium to a traumatized cervix; in all cases a history of labor or cervical operation preceded the occurrence of this disease. Pain is not a prominent feature of cervical endometriosis, but abnormal bleeding is very frequent, and superficially it resembles closely carcinoma of the cervix. Differential diagnosis is readily made by microscopic examination of the tissue biopsy.

Endometriosis of the cecum is rare, but Masson



and Conker reported 14 cases in which the cecum was involved. Right lower quadrant pain with nausea and vomiting result in a clinical picture similar to appendicitis, but the pain always occurs just prior to, or during the menstrual flow.

Endometriosis as a cause of intestinal obstruction was reported in 16 cases by McGuff. The symptom of abdominal pain occurred in all cases; constipation during the menstrual flow in 13 cases, abdominal distention in 10 cases; rectal pain, diarrhea and blood in the stools in 5 cases. The possibility of endometriosis as a cause of intestinal obstruction in women 30-50 years of age should be kept in mind, especially those with acquired dysmenorrhea, sterility, rectal or pelvic pain, and menstrual exacerbations of the symptoms of progressive intestinal obstruction.

Endometriosis of the perineum, either following perineal operations or episiotomies, has been reported by numerous authors. It may occur after operative or forceps deliveries, and Schmitz reported a case occurring in the episiotomy wound following spontaneous delivery. Lesions of endometriosis have been found in the abdominal wall, the inguinal glands and even in distant organs such as the lungs.

#### TREATMENT

Probably the most important factor in the treatment of endometriosis is its diagnosis in the early stages of the disease. The clinical treatment will depend upon the age of the patient, social and marital status, the type and severity of the symptoms, the patient's desire for children, and the extent of the lesions relative to both the genital and associated pelvic organs. As stated by Campbell and others, there has been no outstanding contribution to the treatment of endometriosis during recent years.

Treatment may be classified as medical, hormonal, surgical, or radiological, or a combination of these methods of therapy. All are agreed that the treatment of this condition should be as conservative as possible, except in those patients of the older age group with extensive pelvic involvement and severe disability. Endometriosis is not a life-endangering condition, and conservative medical measures will often suffice to control the less severe cases. However, it should be emphasized that endometriosis in the young woman of child-bearing age, especially those without children, bears a careful investigation into the possibilities, as well as the dangers, of conservative treatment. The treatment of endometriosis

is simple when the indications are clear for arresting ovarian function, either by surgical castration, or by x-ray, or radium. The most difficult decisions arise, however, in those patients who are extremely anxious to retain the child bearing and menstrual functions. It is in this group that the policy of increasing conservatism has become manifest. A complete pre-operative discussion between the patient and the surgeon, of the problems involved and the possible surgery required, should be carried out in all cases.

The type of treatment used depends largely upon the choice of the physician and the status of the patient. In the opinion of Meigs, the treatment of endometriosis is surgical, and he feels that the surgical treatment of endometriosis has been satisfactory up to the present time. *A conservative surgical approach to this problem is now considered superior* to other types of treatment. Excision of the pelvic lesions without castration results in the improvement of the disease in many cases, although Fallon and others have reported a high recurrence rate of symptoms following excision without castration. Even when the surgeon feels quite sure that some ectopic endometrium will be left in the pelvis, and that a future second operation may become necessary, these patients will often agree to this approach, knowing that the possibility of future gestation is still maintained.

Many reports in the literature confirm the fact that, following conservative surgery in endometriosis, pregnancy often occurs. Ware has recently reported 13 private cases of endometriosis in whom pregnancy followed, often within a few months after operation, and in four cases a second pregnancy. Scott and TeLinde report a follow-up of sixty-four patients with endometriosis in whom the child-bearing function was preserved at laparotomy. Of these patients 26 had 3 pregnancies, 20 patients had one or more term pregnancies, and 3 had abortions.

Gray reviewed a series of 250 cases of endometriosis treated by surgery, and he found that radical surgery was required in 37.2%, conservative surgery with hysterectomy in 21.6% and conservative surgery maintaining reproductive function in 41.2%. In the radical surgery group 79.6% were over the age of 35 years, and 51.6% had had one or more children. In the patients treated by conservative operation and hysterectomy, largely because of associated fibromyoma of the uterus, 70.4% were under 30 years of

age and subsequent pregnancy occurred for the first time in 33.8% of the married patients. Dysmenorrhea was present in 87.4%, retroversions of the uterus in 59.2%, and myomas of the uterus in 16.4%. Excision of the endometrial implants with suspension of the uterus was the most frequent type of conservative surgery employed.

Baccon reported a series of 214 patients treated by conservative pelvic surgery and, of these, 138 cases had the child-bearing function preserved. Thirty of these patients delivered a total of 39 children, the average interval between operation and delivery being 2.7 years. Sixty-eight, or 49.3%, were relieved of symptoms, 21% were partially relieved and 29.7% were failures, requiring later radical surgery or irradiation. *Irradiation alone as the initial method of treatment, particularly in the younger age group, should always be avoided.*

In the surgical treatment of endometriosis, many modifying conditions may have to be considered in addition to the patient's age, her social status, and her attitude toward future pregnancies. For example, a difficult problem will often be encountered in those cases in which one ovary may be conserved, yet the extensive involvement of the utero-sacral ligaments and the rectum with large nodules and with the rectum tightly adherent to the cervix, complete removal of the endometrial tissue is practically impossible. Each case, therefore, must be decided upon a purely individual basis, with consideration of all the personal and anatomic factors in each case. Certainly the principle of routine castration for endometriosis is absolutely disqualified in light of the excellent results of conservative surgery and the relative high incidence of post-operative gestation.

Karnaky, Bickers, and others have advocated the treatment of endometriosis by the use of stilbestrol in large doses, and over long periods of time. The rationale of this treatment is that stilbestrol produces its effect upon the endometriosis through pituitary inhibition. According to Siegler, prolonged and increased use of stilbestrol has been explained as having a suppressing effect on the anterior pituitary; thus inhibiting or diminishing ovarian activity and causing atrophy of the ovaries. This in turn reduces estrogenic stimulation to the normally placed or ectopic endometriosis, with resulting amenorrhea. Small doses, even though continuously used, do not produce this effect. The same phenomenon probably occurs during pregnancy. To explain why, with

stilbestrol therapy, endometrial lesions undergo atrophy while the intrauterine endometriosis undergoes hyperplasia, Greenblatt postulated that endometriosis may in most cases be derived from celomic epithelium or some other embryonic cells which are easily destroyed by large and continuous doses of estrogen. However, at present the mode of action of stilbestrol can only be conjectured, and its use should be continuously and judiciously individualized. However, this method of treatment is not widely accepted, due to the necessity of prolonged treatment, and to the fact that this method of therapy is purely palliative, and never curative.

Greenblatt and Suron have recently reported the use of testosterone by pellet implantation in alleviating the symptoms of endometriosis pre-operatively, and the control of residual or recurrent endometrial lesions following conservative surgery.

Hirst also reports satisfactory results with the use of androgens. 150 to 225 mgm. of testosterone propionate in oil was injected intramuscularly over a period of two to three weeks, followed by 10 mgm. of methyl testosterone daily by mouth for variable periods.

Preston and Campbell reported a series of 187 private cases treated by oral methyl testosterone during the past 9 years, and they feel that androgea therapy definitely relieved the symptoms and caused a regression in the nodules of endometriosis, as well as over-coming the sterility and making less formidable any surgical treatment which followed hormonal treatment with androgens.

Many other authors have also attested to the merits and safety of androgen therapy, either orally or hypodermically, but all are agreed that androgenic hormone therapy has only a temporary action and will not cure endometriosis, similar to the results following estrogenic hormone therapy.

#### SUMMARY AND CONCLUSIONS

1. Endometriosis is now recognized as one of the most frequent causes of pelvic disease in the younger woman of child-bearing age.
2. The relationship of endometriosis to female sterility has been stressed.
3. The histogenesis, pathology, incidence, diagnosis, symptomatology, and treatment have been briefly reviewed.
4. Conservative surgical treatment, with preservation of the child-bearing function in young

women and those without children, is advocated whenever possible.

5. Hormonal therapy of endometriosis is only palliative and not curative.

#### BIBLIOGRAPHY

1. Sampson, J. A.: Arch. Surgery, **3**:245, 1921.
2. Sampson, J. A.: Am. J. Obst. & Gynec. **14**:22, 1927.
3. Ware, H. Hudnall: Am. J. Obst. & Gynec. **59**:715, 1950.
4. Fallon, John: J.A.M.A. **131**:1405, 1946.
5. McDonald, R. E.: Am. J. Obstet. & Gynec. **45**:1038, 1943.
6. Holmes, Walter R.: Am. J. Obstet. & Gynec. **43**:255, 1942.
7. Tyrone, Curtis H.: J. Okla. Med. Assn., Oct., 1950.
8. Fallon, John: Rhode Island M. J. **33**:15, 1950.
9. Greenblatt, Robert B., and Suran, Roland R.: Surg. Clinics N. America, **29**:583, 1949.
10. Meigs, Joe Vincent: Surg., Gynec. & Obst. **89**:317, 1949.
11. Scott, Roger B.: Amer. J. Obst. & Gynec. **47**:608, 1944.
12. Stone, M. L.: Amer. J. Obst. & Gynec. **35**:883, 1938.
13. Sackett, N. B.: Amer. J. Obst. & Gynec. **42**:394, 1941.
14. Fitzgerald, W. L., and Kuler, M. A. R.: J. Urol. **62**:467, 1949.
15. Siddall, R. S., and Mack, H. C.: Harper Hosp. Bull. **7**:195, 1949.
16. McGuff, P.: Proc. Staff Meeting, Mayo Clinic, **23**:215, 1948.
17. Schmitz, H. E., and Grossbard, Paul: Amer. J. Obst. & Gynec. **55**:880, 1948.
18. Campbell, R. E.: Minn. Med. **32**:1089, 1949.
19. Scott, Roger B., and TeLinde, Richard W.: Personal Communication to Dr. Ware, 1949.
20. Gray, Lawson A.: J. Oklahoma M.A. **42**:192, 1949.
21. Bacon, W. Benjamin: Amer. J. Obst. & Gynec. **57**:953, 1949.
22. Karnaky, Karl J.: South M. J. **41**:1109, 1948.
23. Bickers, Wm.: South. M. J. **42**:229, 1949.
24. Siegler, S. L., and Bissacio, J. R.: Amer. J. Obst. & Gynec. **61**:99, Jan., 1951.
25. Gardner, G. H., Greene, Roland R., and Ramsey, Brooks: Obst. & Gynec. **1**:615, June, 1953.
26. Scott, Roger B.: Obst. & Gynec. **2**:283, Sept., 1953.
27. Preston, Stephen N., and Campbell, Harry B.: Obst. & Gynec. **2**:152, August, 1953.

511 Allied Arts Building.

#### Diet May Cure Delusions.

Correction of a deficient diet may cure the delusion of being parasitized by insects, it was reported in the (May 1st) Journal of the American Medical Association.

Four cases in which patients described bizarre habits of fictional parasites upon their bodies were discussed by Dr. Irma Aleshire, Iowa City, Iowa. All the patients suffered from pellagra, a deficiency disease, and all were cured of their delusions after institution of a proper, antipellagrous diet.

The patients believed the imaginary insects to cause burning, crawling, itching sensations to their skin. In attempts to alleviate the sensations, the patients scratched themselves until their skin bled, or dug small holes in their skin with their fingernails. They also washed their clothing and bed-

clothing daily, bathed themselves frequently, and applied various anti-insecticidal preparation to their bodies.

"It is significant that a history of poor eating habits was elicited on questioning the only patients with delusions of parasitosis whom I have seen in the past 11 years, and that correction of their eating habits cured their affliction," Dr. Aleshire stated.

"The fact that crawling sensations and burning pain as from the bite of an insect were present may have led the patients to the wrong assumption that such symptoms were due to the presence of insects. Fantastic irrationalization as to the nature and habits of the supposed parasites may be connected with the fact that the central nervous system is particularly vulnerable to malnutritive changes, as manifested in pellagra."



## PRIMARY MELANOMA OF THE ILEUM

EDMUND M. CHITWOOD, JR., M.D.,\*

Pulaski, Virginia,  
and

GEORGE B. GUARINO, M.D.,\*\*

Louisville, Kentucky

Richman and Lipsey<sup>1</sup> reported two cases of melanoma of the small intestine in 1951. They found records of 31 additional cases, but only ten of the 33 were primary in the intestine. Laidlaw,<sup>2</sup> also Herbert and Manges,<sup>3</sup> expressed doubt that melanomas can arise in the intestine. The following case, believed to be a primary melanoma of the ileum, is being reported because of its rarity.

## CASE REPORT

A 60 year old white male was in good health until March, 1952, when he noted vague, intermittent, cramping pain in the epigastrium. Three months later he had chills and fever and severe generalized abdominal pain, with distention. Exploratory laparotomy was done elsewhere. A mass some 24 inches proximal to the ileo-cecal junction was found. A double barrel ileostomy was done as the patient's condition was grave. The ileostomy closed spontaneously some three weeks after operation, though fecal material continued to drain intermittently. Five months after the initial complaints, he sustained a severe attack of cramping abdominal pain, abdominal distention and increased fecal drainage from the ileostomy site. Initial examination at this hospital revealed a well developed, well nourished adult white male in acute distress and moderately dehydrated. The blood pressure was 120/60, the pulse 160, temperature 101.4°. The abdomen was distended, tympanitic and markedly tender in the right lower quadrant. A tender, ill-defined mass filled the right lower quadrant and extended just to the left of the midline of the lower abdomen.

*Laboratory Data:* The erythrocyte count was

\*From the Laboratory Service, Veterans Administration Hospital, Louisville, Kentucky, and the Department of Pathology, School of Medicine, University of Louisville, Louisville, Kentucky.

\*\*From the Surgical Service, Veterans Administration Hospital, Louisville, Kentucky, and the Department of Surgery, School of Medicine, University of Louisville, Louisville, Kentucky.

Reviewed at the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are the results of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

4,200,000 per cu. mm. with 80% hemoglobin per 100/ml. The leucocyte count was 4,000 per cu. mm. with a "shift to the left". The urine was normal and a Kahn test on the blood was negative. Examination of the upright films of the abdomen revealed fluid levels in the small bowel and colon. A diagnosis of intestinal obstruction was made and a laparotomy performed. There was fibrinous peritonitis with marked agglutination between many loops of the small bowel. A large, necrotic, friable mass consisting of omentum and ileum was found just distal to the ileostomy. Frank pus was encountered while dissecting this free. The entire mass and the double ileostomy was resected and a primary ileo-ileal anastomosis was done.

*Pathology Report:* The gross specimen consisted of two portions of small bowel, measuring 50 cm. and 30 cm., respectively. These were dilated, edematous and had a pale velvety mucosa. There was hyperemia of the serosa with small areas of necrosis. The shorter segment contained a pearly grey, constricting, polypoid tumor which measured 6 x 11 cm. It had a necrotic, hemorrhagic center and extended into the serosa. No other tumor was seen in either of the two portions of the bowel, but there were foci of necrosis, hemorrhage and edema and many small areas of fibrino-purulent exudate on the serosa. Several firm lymph nodes, the largest measuring 3 cm. in diameter, were noted immediately adjacent to the growth. Some of these were partly replaced by metastatic tumor tissue.

*Microscopy:* Microscopic examination of random sections of the tumor in the ileum and the regional lymph nodes revealed extensive replacement by tumor cells growing in alveolar and medullary nests (Figure 1). The tumor cells varied considerably in morphology. Many had acidophilic cytoplasm, an annular or irregular nuclei and tumor giant cells were numerous (Figure 2). A finely granular, very light brown pigment was present in an occasional cell. This pigment was argyrophilic and resembled melanin histochemically (Figure 3).

*Interpretation:* Malignant melanoma (primary

in ileum) with metastases in the regional lymph nodes.

#### COMMENT

After the operation it was found that a mole was removed from the patient's chin by a barber some

Extensive metastases were found post-mortem in his case. This tumor morphologically and histochemically fulfills the criteria for the diagnosis of melanoma. We believe it is primary, because no other tumors could be demonstrated clinically or

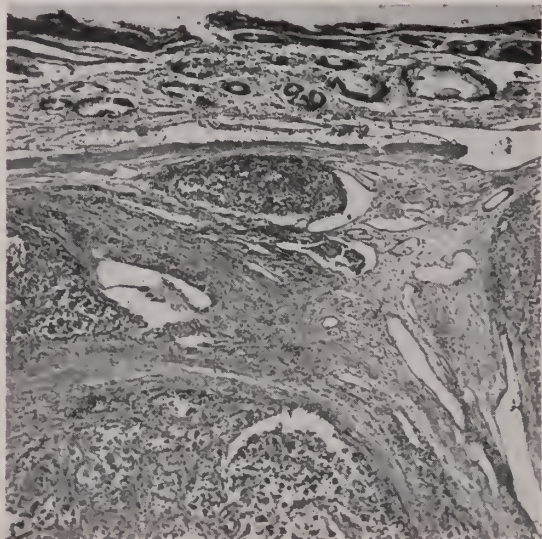


Fig. 1. The ileum is invaded by nests of tumor cells which extend to the muscularis mucosae. Hematoxylin and eosin stain  $\times 48$ . (Armed Forces Institute of Pathology negative 53-8504, Accession No. 54867.)

45 years previously. It is unlikely that this could have been the primary lesion, although Galgona<sup>4</sup> recently reported a case in which a patient survived 20 years after removal of a melanoma of the face.

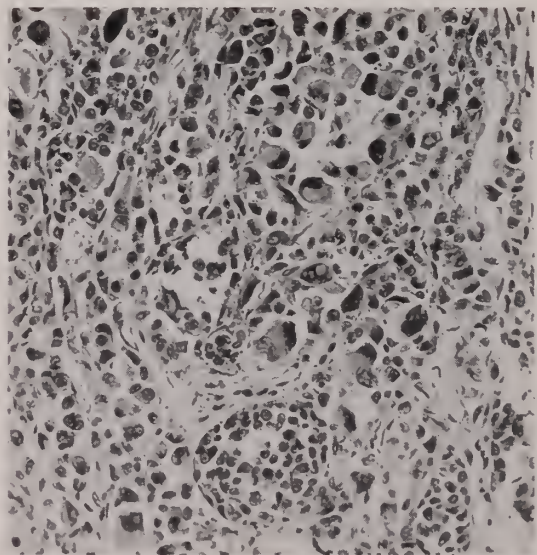


Fig. 2. Detail of cellular pattern with extensive variation in size and shape of the cells and their nuclei. Occasional multinucleated cells are seen. Hematoxylin and eosin  $\times 200$ . (Armed Forces Institute of Pathology negative 53-8505, Accession No. 54868.)

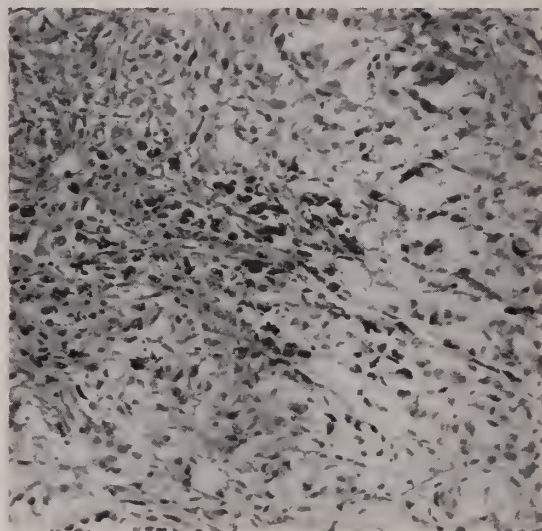


Fig. 3. The tumor cells contain granules which are argyrophilic. Fontana silver stain  $\times 200$ . (Armed Forces Institute of Pathology negative No. 53-8506, Accession No. 54868.)

roentgenologically, despite careful search. The history indicating that a mole was removed 45 years ago, is not regarded as significant. If that had been the source of the primary, metastases should have appeared sooner and/or should have involved the regional lymph nodes, lungs, skin and liver, in addition to the single mass described clinically. It is interesting to note that nine out of the ten primary intestinal melanomas reported previously were found in men and all occurred in whites.<sup>1</sup>

#### SUMMARY

A case of primary melanoma of the ileum is reported. Attention is directed to the rarity of the lesion which occurs almost exclusively in white males.

#### BIBLIOGRAPHY

1. Richman, Alexander, and Lipsey, Joan: Melanoma of Small Intestine and Stomach, *J. Mt. Sinai Hosp.* **17**: 907, 1951.
2. Laidlaw, G. M.: Melanoma Studies, *Am. J. Path.* **8**: 477, 1932.
3. Herbert, P. A., and Manges, W. E.: Melanoma of Small Intestines, *Arch. Path.* **32**: 22, 1945.
4. Galgona, A. R.: Long Survival in a Malignant Melanoma, *J.A.M.A.*, **152**: 518, June 6, 1953.



## CLAVICULAR CHANGES ASSOCIATED WITH SECONDARY HYPERPARATHYROIDISM\*

ROBERT L. FRIEDMAN, M.D.,\*\*

SIMON RUSSI, M.D.

and

WILLIAM F. BARRY, JR., M.D.,\*\*\*

Richmond, Virginia

Roentgen changes in the region of the acromio-clavicular joint in cases of hyperparathyroidism secondary to chronic renal insufficiency (renal rickets, renal osteodystrophy, osteonephropathy or renal osteitis fibrosa generalisata) have been described by various authors. These consist of cupping of the outer ends of the clavicles with fraying due to irregular absorption of the articular surface. Sometimes similar changes occur in the acromion process, with or without widening of the acromio-clavicular joint space. Recently, Nathanson and Slobodkin<sup>9</sup> stated that these findings on radiologic examination were a presumptive sign of hyperparathyroidism. They demonstrated these changes in two cases of osteonephropathy and one case of primary hyperparathyroidism.

A review of the literature in an attempt to determine the incidence of these clavicular changes in the acromio-clavicular joint revealed only twelve reports which mention these changes or present x-rays demonstrating them. Norman, Perlman, and Bostable<sup>10</sup>, Cancellmo and Bromer<sup>4</sup>, Miller and Sissons<sup>8</sup>, and Herbert, Miller and Richardson<sup>7</sup>, each report a case of osteonephropathy and Case 37401 of the Case Records of the Massachusetts General Hospital<sup>5</sup> is a report of proven hyperparathyroidism, describing changes at the acromio-clavicular joints and demonstrating them on x-ray examination. Herbert, *et al.*, also described the pathologic changes at post-mortem. Bass and Pakter<sup>2</sup> report clavicular changes, but do not present the x-ray films demonstrating them. Pugh<sup>11</sup> demonstrates the described changes in one

case of hyperparathyroidism but makes no further comment about the findings in the text. In Smyth and Goldman's<sup>12</sup> report, an early chest x-ray examination demonstrates these changes, but a later film shows marked calcification of the soft tissues in this region which obscures the changes seen earlier. In the case of Renal Osteitis Fibrosa Cystica reported by Albright, Drake, and Sulkowitch<sup>1</sup>, the x-ray film showed calcific masses in the region of the acromio-clavicular joints. Can we assume that this case went through the stage of cupping and fraying of the outer end of the clavicle just as did the case of Smyth and Goldman? There are nine cases in the literature of renal disease with secondary hyperparathyroidism and three cases of primary hyperparathyroidism which demonstrates the described changes at the acromio-clavicular joint regions.

We are reporting the following case of changes at the distal end of the clavicle which occurred as a result of secondary hyperparathyroidism.

### CASE REPORT

C. H. (Reg. #322697), a 25 year old white male student, was first admitted to this hospital on June 22, 1948, with the chief complaints of mild right flank pain and urinary frequency. There was no radiation of pain or hematuria. There were no other systemic complaints.

The past history revealed that, at the age of fifteen, the patient had an episode of fever and malaise, at which time he was told that he had "pus in his urine". In June, 1944, he was inducted into the Army but was rejected for paratrooper training because of "albumin in my urine". He was hospitalized while in combat because of trench-foot. At this time, albuminuria was discovered, and eventually he received a medical discharge with the diagnosis of congenital absence of the right kidney and severe hydronephrosis of the left kidney.

Physical examination on this admission revealed a blood pressure of 140/70. The heart and lungs were

\*From the Departments of Radiology and Pathology, McGuire Veterans Administration Hospital, Richmond, Virginia.

\*\*Now, Associate Radiologist, Grant Hospital, Columbus, Ohio.

\*\*\*Now, Associate Radiologist, Chesapeake & Ohio Hospital, Clifton Forge, Virginia.

Reviewed in the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are the result of their own study and do not necessarily reflect the opinions or policy of the Veterans Administration.



normal. There was slight bilateral costovertebral angle tenderness.

The chest was normal on radiologic examination. Intravenous pyelography revealed irregular streaky calcifications in the right renal area, but the right renal shadow was not visualized. No function was noted on either side, ninety minutes after the injection of dye. Retrograde pyelography revealed a normal urinary tract on the left. On the right side, the ureter outlined normally. However, no pelvis or calices were seen. Mottled calcifications were seen just above the proximal end of the ureter.

The patient was discharged and readmitted on two subsequent occasions within six months for follow-up. He remained asymptomatic.

Physical examination revealed a blood pressure of 170/100 with normal pulse rate. The patient appeared chronically ill, ashen grey, and had periorbital edema. He was found to be anemic and acidotic for which he was treated with multiple transfusions and intravenous lactate solution. After some clinical improvement, he began to complain of pain in his legs and shoulders.

Roentgen examination at this time revealed the following: The chest was normal except for thinning and fraying of the external ends of the clavicles with increase of the acromio-clavicular joint spaces. Special studies of the shoulder region (Figs. 1 & 2) confirmed these findings and on the right, an oval 2.0 cms. long calcification lying above the joint space



Fig. 1. Right shoulder showing cupping and fraying of distal end of clavicle. Soft tissue calcification is noted above the acromio-clavicular joint.

The final admission to this hospital occurred two years and seven months after the initial admission. The patient complained of increasing lethargy, painless muscle twitching, mental confusion and "bad dreams". There were no gastro-intestinal, cardio-respiratory or genito-urinary symptoms.

in the soft tissues, was noted. The skull was normal. Calcification was seen in the popliteal vessels.

The possibility of secondary hyperparathyroidism was considered. The laboratory findings of decreased calcium (8.5 mgms./100 cc.) and increased phosphorus (16 mgms./100 cc.) were confirmatory evi-



Fig. 2. Left shoulder showing resorption of distal ends of clavicle without cupping and fraying.

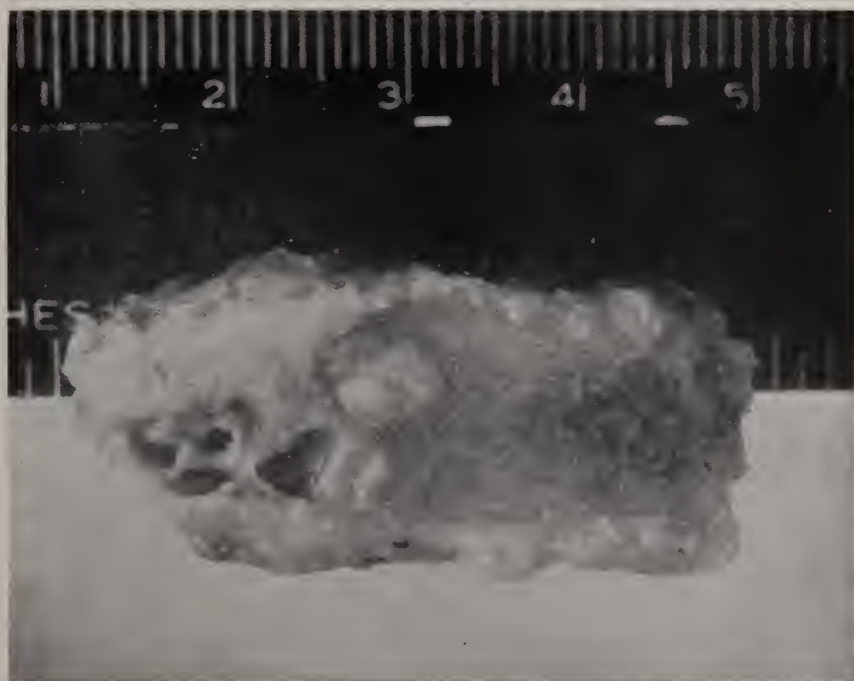


Fig. 3. Gross specimen of right clavicle showing cystic changes in distal end of clavicle. The cupping seen on x-ray is apparently due to bone resorption affecting the middle portion (medulla) of the end of the clavicle more than the margin (cortex).

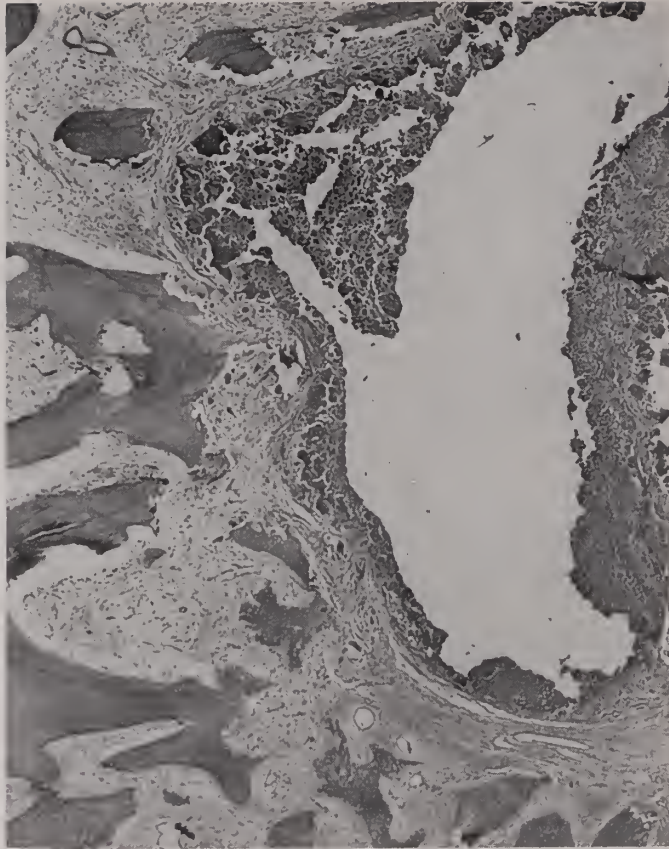


Fig. 4. Low power photomicrograph showing the distal ends of the resorbing trabeculae on the left. The fibrous replacement of the marrow can be seen adjacent to the cyst. One of the cysts lined by amorphous debris is seen on right (X 10).

dence of this diagnosis. The BUN and creatinine, which originally were 41 mgms./100 cc. and 7.3 mgms./100 cc., had increased to 170 and 8.6, respectively.

The patient improved further, as indicated by a lowering of the BUN and creatinine to 110 and 7.5, and elevation of the  $\text{CO}_2$  combining power to near normal. He was allowed to go home on pass but returned in two weeks because of severe epistaxis. He was acidotic, and the respirations were of the Cheyne-Stokes type. He began to manifest signs of cardiac decompensation, pulmonary and peripheral edema. His course was progressively downhill. He developed oliguria and expired one month after return to hospital.

An autopsy was performed eight hours after death and the following findings were noted:

There was a rudimentary right kidney weighing 10 grams which preserved the gross contours of a normal organ. The pelvis was obliterated by calcific

deposits. The ureter below the uretero-pelvic junction was patent. Microscopic examination revealed a hypoplastic organ with almost total absence of glomeruli. The left kidney weighed 100 grams and showed evidence of far advanced chronic pyelonephritis and moderate hydronephrosis. Marked metastatic calcification was noted in both kidneys. The lower urinary tract showed evidence of chronic cystitis and prostatitis.

In view of the previous radiological findings, the distal segment of the right clavicle, measuring 5 cms., was removed. The end of the clavicle (Fig. 3) was honeycombed by multiple small cavities averaging 0.8 cms. in diameter, apparently resulting from resorption of the central portion of the bone end. The cavities contained a yellowish-white, thick, semi-liquid material which dried to a white, chalky substance. A thin fibrous membrane separated this area from the acromio-clavicular joint. An irregular deposit of calcification was seen in the soft tissues



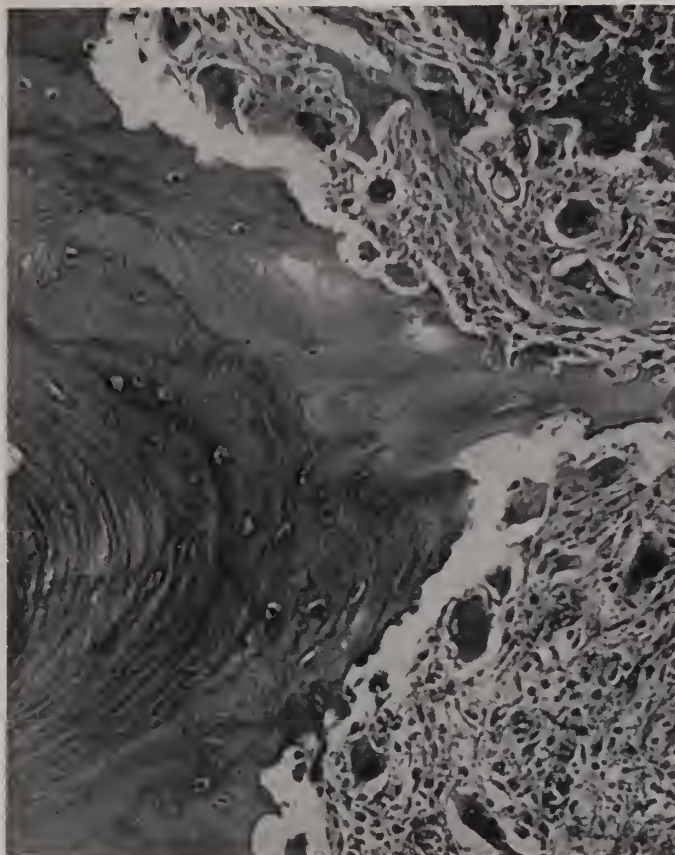


Fig. 5. High power photomicrograph of distal end of one of the trabeculae with surrounding areolar tissue containing multinucleated osteoclasts (X 200).

superior and anterior to the joint.

Histologic examination of the distal end of the clavicle revealed multilocular cavitation of the bone. The cavities were lined by an amorphous, granular basophilic deposit supported by a relatively acellular compressed areolar tissue (Fig. 4). The same type of connective tissue formed the septa between the loculations and replaced the usual marrow elements of the area. Some bony trabeculae were seen around the cavities. The ends of the trabeculae directed towards the cavities were frayed and eroded by numerous multinucleated osteoclasts (Fig. 5). Normal marrow elements were seen in the medial portion of the specimen some distance away from the cavities.

A deposit of delicate osteoid trabeculae surrounded by osteoblasts was seen beneath the periosteum. This compensatory process tapered off medially approximately at the level of the medial margin of the resorptive lesion.

Three parathyroids were recovered and appeared markedly enlarged, measuring 1.0 to 1.5 cms. in

diameter. They showed a typical secondary hyperplasia of chief cells as described by Castleman and Mallory<sup>6</sup>. The adipose cells were completely crowded out. The chief cells were arranged mostly in solid sheets, but occasionally arrangement in cords and columns could be made out. There were also some microcystic changes and some papillation. The cells in the cords appeared usually cuboidal or low columnar. Where they appeared in solid sheets they assumed a polygonal shape (Fig. 6).

The heart was hypertrophic (450 grams) and showed evidence of fibrinous pericarditis.

The lungs revealed several areas of unresolved pneumonia and extensive metastatic calcification. The latter was manifested by dense elongated spicules embedded in the alveolar septa.

The gastro-intestinal system showed shallow esophageal erosions and confluent hemorrhagic acute colitis (uremic).

No lesions were found in the liver, gallbladder, pancreas, spleen, adrenals and thyroid.

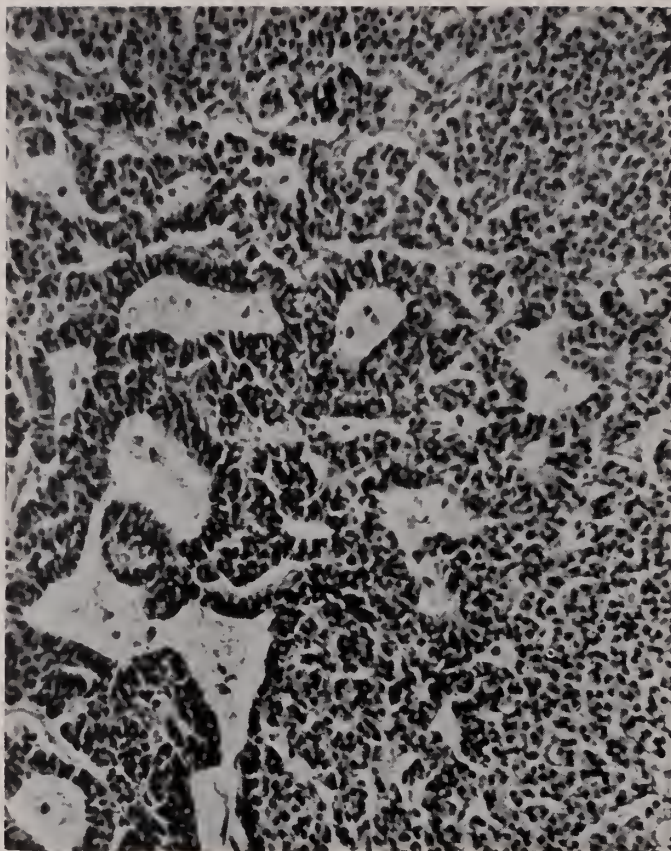


Fig. 6. High power photomicrograph of the parathyroid gland showing cords and sheets of chief cells on right. Microcystic changes with papillation is noted on the left side (X 200).

#### DISCUSSION

The cupping and fraying of the distal end of the clavicle has been demonstrated histologically. It is apparently due to a resorptive process causing pseudocystic changes in the bone adjacent to the joint space. This finding agrees with the work of Herbert, Miller, and Richardson<sup>7</sup>. The acromion was unaffected by the process and the acromio-clavicular joint space was not involved. The apparent increase in the joint space on x-ray appears to be due to bone resorption of the outer end of the clavicle.

Subperiosteal resorption of the bone noted most frequently along the margins of the middle phalanges of the hands, the medial aspect of the upper third of the tibia and occasionally the inferior aspect of the outer third of the clavicle has been noted by several authors. It was first described by Camp and Ochsen<sup>3</sup> in primary hyperparathyroidism and osteonephropathy. Pugh presents these changes as pathognomonic of these diseases.

The radiologic demonstration of the subperiosteal bone resorption of the inferior aspect of the outer third of the clavicle associated with cupping and fraying of the end is shown in Pugh's paper. Nathanson and Slobodkin, believe that the cupping and fraying of the distal end of the clavicle are pathognomonic of hyperparathyroidism and osteonephropathy. The authors agree that the two signs are distinct and suggest that the process is the same in all sites. Its presence in all sites is not necessary for the diagnosis. Our patient showed the changes only at the outer end of the clavicles.

In all the diseases showing osteoporosis or demineralization that have to be differentiated from primary and secondary hyperparathyroidism, no case has been found in the literature which demonstrates the described changes at the acromio-clavicular joint region. Hence, it is suggested that in all cases of osteoporosis where the diagnosis is in doubt, x-rays of the shoulders should be studied as an aid in differential diagnosis.

## SUMMARY

1. A case of osteonephropathy with cupping and fraying of the outer ends of the clavicles, with post-mortem findings, is reported.

2. A review of the literature of cases of primary and secondary hyperparathyroidism demonstrating changes in the acromio-clavicular joint region is presented.

3. The changes of cupping and fraying of the outer ends of the clavicle, pathologically, are a resorptive process that affects the outer end of the clavicle with pseudo-cyst formation. This process may affect the acromion but was not demonstrated in the author's case. The joint space is unaffected.

## BIBLIOGRAPHY

1. Albright, F., Drake, T. G., and Sulkowitch, H. W.: Renal Osteitis Fibrosa Cystica. *Johns Hopkins Hospital Bull.*, 60-61: 377-399, 1937.
2. Bass, M. H., and Pakter, J.: Congenital Polycystic Kidneys with Secondary Bone Changes. *J. Mt. Sinai Hospital*, 3-4: 882-893, 1938.
3. Camp, J. D., and Ochsner, H. C.: Osseous Changes in Hyperparathyroidism Associated with Parathyroid Tumor. *Radiology* 17: 63-69, 1931.
4. Cancelmo, J. J., and Bromer, R. S.: Osteonephropathy in Children. *Am. J. Roent.* 65: 889-916, 1951.
5. Case #37401 Case Records of the Massachusetts General Hospital. *New Eng. Med. J.* 245: 537-540, 1951.
6. Castleman, B., and Mallory, T. B.: Parathyroid Hyperplasia in Chronic Renal Insufficiency. *Am. J. Path.* 13: 553-574, 1937.
7. Herbert, F. K., Miller, H. G., and Richardson, G. O.: Chronic Renal Disease, Secondary Parathyroid Hyperplasia, Decalcification of Bone and Metastatic Calcification. *J. Path. and Bact.* 53: 161-182, 1941.
8. Miller, G. M., and Sissons, H. A.: A Case of Renal Ricket Simulating Metaphysical Dysostosis. *J. Bone and Joint Surg.* 33 B: 231-239, 1951.
9. Nathanson, Louis, and Slobodkin, M.: Acromio-Clavicular Changes in Primary and Secondary Hyperparathyroidism. *Radiology* 55: 30-35, 1950.
10. Norman, J. S., Perlman, R., and Bostable, S.: Renal Osteodystrophy. *J.A.M.A.* 133: 771-773, 1947.
11. Pugh, D. G.: Subperiosteal Bone Resorption. *Am. J. Roent.* 66: 577-586, 1951.
12. Smyth, F. S., and Goldman, L.: Renal Rickets with Metastatic Calcification and Parathyroid Dysfunction. *Am. J. Dis. Child.* 48: 596-616, 1934.

## Sewing Needles in Man's Body.

An unusual case in which about 20 sewing needles were found in the body of a man who never complained of symptoms traceable to the needles was described by Dr. Clarence L. Miller, Washington, in the May 1st *Journal of the American Medical Association*.

The patient, 73 years of age, died in the U. S. Soldiers Home Hospital of a heart condition. A

routine autopsy disclosed about 20 sewing needles scattered throughout the body—in the left side of the chest wall, in the left lower lobe of the lung, in the diaphragm, in the liver, and in the colon.

The needles were covered with rust and surrounded by a large amount of fibrous tissue. There were no eyes in any of the needles; all had rusted out. The needles apparently were ingested during the years the patient worked as an upholsterer and furniture maker.



## RETROVERSION OF UTERUS\*

JOHN M. NOKES, M.D.,  
University of Virginia,  
Charlottesville, Virginia

One of the most abused of all surgical-gynecological procedures is suspension of the retrodisplaced uterus, which in most instances is entirely asymptomatic. I refer to the operation as done as the primary procedure and see no objection to its use following abdominal myomectomies or conservatism in the treatment of endometriosis. Estimates as to the frequency of this condition are as numerous as there are types of operations or mechanical devices suggested for its correction. It is my firm belief that about twenty percent of all nulliparous patients have retrodisplacement, either retroversion-flexion or retrocession. In those patients who do not have this finding before childbirth, sixty-five to seventy percent will develop it after childbirth. This seems to occur in spite of good obstetric care and does not seem to be influenced by early ambulation of the postpartum patient.

The excellent article by Cave<sup>1</sup> following a questionnaire is worthy of review. The following question was asked:

"Would you please give a brief and concise opinion as to the indications, if any, for a suspension of the uterus?" The answers were in the main conservative and the majority felt that the operation had merit in certain gynecological conditions, but these were rare and no one group performed many suspensions. Many were very adamant in their opinion that there were no indications at all for the procedure. These are the conditions in which the majority felt that the operation was of value, although not all were agreed on some of the indications. For example, the question of sterility. A very few felt that when all other methods had been exhausted, there was the rare instance where its procedure had been used successfully. I personally feel that the operation is never indicated where a freely movable retrodisplaced uterus is associated with sterility. What constitutes an adherent uterus? Is it generalized, pelvic tenderness, or bimanual examination, or is the same tenderness elicited on rectovaginal examination? If the latter is absent, I do

not think the uterus is adherent, even if it cannot be replaced.

As reported by Cave's investigation of two hospitals located in an urban community, the operation is extensively used whereas the questionnaire would seem to justify but few suspensory procedures.

Hospital A: A 303-bed institution has about 9,500 annual admission rate. In a four year period there were 291 uterine suspensions done. Two hundred and twenty-seven were done with an entrance diagnosis of uterine retroversion and 63 were found at surgery and corrected or done with other surgery (72.7 annually).

Hospital B: A 171-bed institution in the same community with an annual admission rate of about 6,000. In the same four year period there were 117 uterine suspensions done, or an average of 29.2 annually.

One excellent reply to the oft-time mentioned questionnaire is worthy of quotation: "Thirty years ago it was a common procedure. Now we do about one a year for endometriosis."

I must be frank and will be the first to admit that 10-15 years ago we frequently suspended the uterus usually as part of a general plastic repair. It is our feeling at this time that there is no place for this operation in conjunction with the repair of vaginal outlet relaxation. During the past three years there have been two suspensions done on our Service with retroversion of the uterus as the original diagnosis.

We often see the operation performed to correct a cystocele or urethrocele. Perhaps the only symptom which the patient has is "stress incontinence". The surgeon who thinks he can correct the distressing symptom by elevating the cervix uteri, is sadly mistaken. If he carries out this operative procedure, not only does he fail, but makes it more difficult for the gynecologist to correct at a later date the pathology which caused the initial symptom. Suffice it to say not only is it necessary to understand the anatomy of the female pelvis, but one must also try to visualize and interpret the symptoms which may arise from the disturbance of the normal anatomy. The proper

\*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953, as part of the Obstetrical and Gynecological Symposium.

choice of route is important in doing pelvic surgery in order to prevent prolapse of vaginal vault.

There is great doubt in my own mind that backache in the female is ever due to misplacement of the non-adherent uterus. If one could be positive that the retroversion is adherent, conceivably it could cause this symptom.

It is my firm belief that retroversion does not play any part in the production of spontaneous abortions.

If both partners are thoroughly investigated, usually some cause will be found, although there is an occasional case which eludes us.

Conservatism should be stressed in dealing with the female pelvis, if we are to avoid starting many women on the way to pelvic invalidism.

#### REFERENCE

1. Cave, W. H.: *The American Surgeon*, XVIII: No. 7, July, 1952, pp. 670-677.

### Periodic Medical Examination of Business Executives Urged.

The health of America's business executives is one of the country's greatest assets and should be protected by periodic medical examinations, it was stated in a recent *Archives of Industrial Hygiene and Occupational Medicine*, published by the American Medical Association.

Studies have disclosed that upon examination approximately 60 per cent of the business executives have one or more significant abnormality, many of them correctable, according to Dr. George M. Saunders, New York. Dr. Saunders is the medical director of the Socony-Vacuum Oil Company and co-chairman of the American Petroleum Institute, Medical Advisory Committee.

He pointed out that there are about 2,500,000 executives or managers among the country's 50,000,000 labor force, adding:

"The value of health programs to the individuals and to business is unquestioned. Better health means better morale, greater efficiency, and a longer useful life.

"During the last half century, America has grown from an agricultural country to the greatest industrial nation that the world has ever known. It seems obvious that the physical as well as the mental health of those responsible for directing our industrial machinery may have a profound effect on its success or failure."

There are special stresses and strains which are exerted on the executive and which demand peculiar qualities of resistance for survival, Dr. Saunders stated. As a result, executives are prone not only to the same health problems as the daily paid workers,

but also to special problems caused by their positions.

"The intrinsic qualities which make men able executives, such as imagination and driving energy, are the very ones which may lead to disaster," he pointed out. "The ability, vision, imagination and driving energy required of an executive must be coupled with that essential serenity and balance that come with emotional maturity if the executive neurosis is to be avoided.

"Many who lack this emotional maturity are promoted beyond their depth. They may become over-aggressive, tense, and anxiety-ridden, although this may not show on the surface, and a vicious spiral is started of anxiety, hostility, overactivity, and still more anxiety. And so round and round until suddenly something gives."

The most important feature of executive health programs is the system of careful, periodic health inventories which are made to assess the physiological and emotional condition with special reference to the demands of the job, according to Dr. Saunders. These inventories should be a part of any selection program for promotion. Thus, it may be possible to save a man from overpromotion, thereby protecting not only his health, but also the interest of the company and the stockholders.

Of the defects of function or structure that have been found in about 60 per cent of the business executives receiving periodic health examinations, the most prevalent were obesity, gastric distress, vision defects, high blood pressure, neuroses, anxiety and tension states, heart disease, and cancer. Forty per cent of the executives stated that they did not know such abnormal conditions existed, Dr. Saunders said.

## RUPTURE OF AN ANEURYSM OF THE CIRCLE OF WILLIS COMPLICATING PREGNANCY

GEORGE SPECK, M.D.,  
Arlington 6, Virginia

Pregnancy complicated by subarachnoid hemorrhage due to rupture of an aneurysm of the Circle of Willis is, according to the literature, not common.<sup>1-9</sup> Yet, the increasing number of cases reported during the past few years would make it seem that this clinical entity has become more recognizable through the improvement in arteriograms and diagnostic acumen. It is, therefore, possible that previously cases were occurring, but were not reported because of lack of recognition.

I wish to present a case which occurred on the fourth postpartum day and to highlight certain points which were common to this case and those of other authors.

Mrs. N. E. was a 35 year old white female, secundigravida and primipara, whose LMP was October 10, 1952 and whose EDC was July 17, 1953.

Her first child was delivered by me in 1947. At that time, her prenatal course was uneventful except for a secondary anemia which responded to oral hematinics. Labor lasted 15 hours and an 8 pound 9¼ ounce male child was delivered with ease by outlet forceps after a right medio-lateral episiotomy. The anesthesia used was N<sub>2</sub>O and O<sub>2</sub> plus pudendal block. The postpartum course was uneventful.

Eight months after delivery the patient complained of tiring easily, being emotionally upset and crying readily. She felt that everyone was against her. Her relations with her husband were strained, for the baby was "getting on his nerves". She was given "sympathetic understanding", mild sedatives and seemed to improve over the next few months.

She was not seen the following two years. In 1949 she came to the office with numerous complaints including tenderness of the vulva, soreness in hips, pelvic pressure and a "feeling of something dropping in pit of abdomen". She was quite nervous and emotionally labile. Again an examination revealed nothing remarkable and her symptoms were considered to be psychogenic in origin. Mild sedatives were given again. At this time, also, she voluntarily expressed a wish never to have any more children.

The patient was not seen again until April 27, 1953, at which time she was 28 weeks pregnant.

Complete physical examination was not remarkable except for a mild secondary anemia and varicosities of the legs. The prenatal course was uneventful and on July 9, 1953, at the 39th week of gestation, she went into spontaneous labor. Labor lasted 10 hours 35 minutes. For analgesia she received 50 mgm. demerol and grs. 1/200 of scopolamine intravenously with good results. The second stage of labor was 13 minutes and delivery was spontaneous, after a right medio-lateral episiotomy. The baby was a female and weighed 6 pounds 1 ounce. Anesthesia was ethylene and oxygen. Blood pressure on admission was 110/70 and one hour postpartum it was 158/90. One ampoule of pitocin was given intramuscularly after the birth of the baby and 1 cc. of ergonovine was given intravenously after the placenta.

The postpartum course was uneventful and the patient was allowed out of bed on the first postpartum day. On the fourth postpartum day the lochia increased and she passed several clots. She was given ergotrate grs. 1/320 by mouth t.i.d. that day. That same evening during visiting hours she told her husband how well she felt and was looking forward to going home the following morning.

During the night, however, she suddenly developed a severe occipital headache which was followed by nausea and vomiting. She was given seconal 0/100 by an intern. The next morning she was noted to be extremely drowsy and slow to respond. Examination revealed nuchal rigidity, slightly hypertonic reflexes and questionable positive Kernig sign. A spinal tap was performed which was grossly bloody. Additional laboratory studies were as follows:

NPN	35.0 mgm/100cc blood
Spinal culture	Negative
Eagle Flocculation	Negative
Clot retractility	Normal
Coag. time (Lee-White)	8' 45"
Bleeding time	55"
Hemoglobin	12.5 Gms.
Hematocrit	40%
White blood count	11,200
Seg	85%
Band	1%
Lymph	14%



Four days later:

Hemoglobin .....	12.5 Gms.
Hematocrit .....	41%
Coag. Time (cap method) .....	1' 45"
Bleeding Time .....	50"
Platelets .....	180,000
White blood count .....	10,900
Seg .....	77%
Eos .....	1%
Lymph .....	22%
Urinalyses .....	Negative

Blood pressure taken at the onset of her symptoms was 120/70.

Immediate therapy was:

Ice cap to head  
Vitamin C  
Vitamin K  
Sodium luminal  
Demerol  
Subcutaneous fluids—Ringer's Solution with Wydase

Her course and symptoms remained unchanged and on the sixth day following her subarachnoid hemorrhage an arteriogram was done and reported as follows:

"There is widening of the lumen of the right carotid artery just proximal to the origin of the anterior and middle cerebral arteries and just at the origin of the posterior communicating artery. This is consistent with aneurysmal widening." (Fig. 1)

On July 27, ligation of the right common carotid artery was performed under local anesthesia. There was no evidence of ischemia of the ipsilateral hemisphere on that occasion or subsequently. She was discharged ten days after the operation, relatively asymptomatic except for repeated headache.

The patient was seen two and three months post-partum, and except for some degree of anxiousness about herself, which is understandable, she seemed to have made a satisfactory recovery.

### CONCLUSIONS

A review of the literature reveals certain salient features from which one may draw some helpful conclusions:

This complication of pregnancy has no special affinity for parity or age.

It has occurred with almost equal frequency dur-



Fig. 1. Arrow points to aneurysm.

ing the antepartum, intrapartum and postpartum periods.

Labor does not seem to cause an increase in the number of cases nor does it cause any difference in the mortality rate.

Elevated blood pressure is not a consistent finding.

Ruptured aneurysm does not seem to be an indication for Cesarean section. We say this with due respect for Conley's and Rand's<sup>2</sup> opinion to the contrary. In spite of 50% of their cases occurring prior to delivery, they still maintain that labor "could well serve to precipitate a hemorrhage in a patient with known vascular abnormality." In three cases<sup>1,7</sup> where sections were done within a few days of the subarachnoid hemorrhage, all three patients died. In Conley's and Rand's cases three sections were performed also: one was done immediately when the hemorrhage occurred during labor and the other two-three months after the hemorrhage. All survived.

Trodella<sup>9</sup> mentioned the possibility of oxytocics serving as precipitating factors in this complication. In our course, ergotrate by mouth was given during the day immediate to the hemorrhage. The cause and effect may be more apparent than real, and we do not think anyone would advocate the discontinued use of oxytocics on the possibility that a rare individual may develop subarachnoid hemorrhage.

The symptoms and signs are rather typical: sudden severe headache, nuchal rigidity, nausea with or without vomiting, normal or elevated blood pressure and a bloody spinal tap.

Immediate therapeutic measures should be instituted toward reducing cerebral irritability, reducing blood pressure if elevated, and increasing coagulability of the blood.

Arteriograms should be done to substantiate the diagnosis and to localize the aneurysm.

Accepted therapy at present is ligation of the ipsilateral common carotid artery.

According to Strohschein and Suzuka<sup>8</sup>, a history of ruptured aneurysm of circle of Willis is no contraindication for future pregnancies—provided there are no residual symptoms. They cited one case, as did Conley and Rand<sup>2</sup>, of uneventful delivery two years after rupture. However, they feel when residual symptoms persist, future pregnancies should be denied.

Mortality rate is approximately 50% during the first attack.

#### BIBLIOGRAPHY

1. Brehm, W.: Rupture of aneurysm of circle of Willis during pregnancy, *Ohio State Med. J.* **47**: 1127-1128, 1951.
2. Conley, J. W. and Rand, Carl W.: Spontaneous subarachnoid hemorrhage occurring in non-eclamptic pregnancy, *A.M.A. Archives of Neurology and Psychiatry*, **66**: 443-463, 1951.
3. DeCarle, D. W.: Pregnancy and cerebrovascular complications, *Western J. of Surg., Obst. & Gynec.* **57**: 181-191, May 1949.
4. Decker, A., and Rowe, E. C.: Subarachnoid hemorrhage complicating pregnancy, *Am. J. Surg.* **85**: 561-563, 1953.
5. Gershenfeld, D. B., and Savel, L. E.: Pregnancy complicated by subarachnoid hemorrhage, *J. M. Soc. New Jersey*, **47**: 374-375, August 1950.
6. Hall, J. E., and Corradini, E. W.: Intrapartum cerebral hemorrhage, *Am. J. of Obstet. & Gynec.* **63**: 192-195, Jan. 1952.
7. Schwartz, J.: Pregnancy complicated by subarachnoid hemorrhage, *Am. J. Obst. & Gynec.* **62**: 539-547, Sept. 1951.
8. Strohschein, D. F., and Suzuka, M.: Ruptured intracranial aneurysm and pregnancy, *Grace Hosp. Bull.* **25**: 71-78, July 1947.
9. Trodella, G. F.: Pregnancy complicated by subarachnoid hemorrhage, *Am. J. Obst. & Gynec.* **63**: 1377-1378, June 1952.

*2808 South Randolph Street.*

## PRURITUS OF THE VULVA\*

C. L. RILEY, M.D., F.A.C.S.,  
Winchester, Virginia

Pruritus of the vulva may reflect a local condition or a serious systemic illness; hence, is one of the most challenging gynecological symptoms. Time does not permit a discussion of all the conditions associated with itching of the vulva; however, a simple classification of the etiological factors should aid in this discussion. A workable classification might include the following:

- I. Constitutional Causes
  - A. Neurosis
  - B. Circulatory changes
  - C. Systemic disease
    1. Diabetes
    2. Uremia
    3. Exanthemata
    4. Blood dyscrasia
    5. Vitamin deficiencies
    7. Dermatitis medicamentosa (bromides, antibiotics, etc.)
    8. Psoriasis
- II. Local Causes
  - A. Acquired (fistulae)
  - B. Malignant neoplasms
  - C. Herpes
- III. Infections
  - A. Venereal
    1. Gonorrhoea (condylomata, Bartholinitis, Skeinitis)
    2. Chancroid
    3. Syphilis (condylomata lata)
    4. Venereal lymphogranuloma
    5. Granuloma inguinale
  - B. Non-Venereal
    1. Mycotic
    2. True fungi, trichophytosis (ringworm), (tinea cruris), (dhotie itch)
    3. Pyogenic (Staph., Strep., B. coli)
    4. Trichomonas
- IV. Parasitic
  - A. Oxyuris (thread worm)
  - B. Pediculosis pubis
  - C. Scabies
- V. Foreign Bodies (pessaries, small objects in children)
- VI. Leucoplakia and kraurosis
- VII. Essential pruritus vulvae

Consideration will be given to those causes of

pruritus most frequently encountered by practicing physicians.

Pruritus secondary to diabetes is usually mycotic and characterized by the typical white deposit covering the vaginal surfaces. Favorable conditions for the growth of monilia are also present in the pregnant individual and constitute the most frequent cause of severe pruritus at this time. Control of the diabetes and treatment with 2% aqueous solution of gentian violet or propion gel results in a prompt and satisfactory result. The pregnant patient may be controlled with treatment at irregular intervals; however, cure is rarely effected until after delivery. (Many advocate the prophylactic painting of the infants mouth with gentian when delivered.) Allergies require evaluation and treatment of the exciting agent. Locally, antihistamine cremes give prompt relief. Pruritus resulting from drug sensitivity requires cessation of administration of the drug and simple antipruritic remedies. Bromides and barbiturates are frequent offenders and all are familiar with the occasional fulminating vaginitis and severe pruritus following the use of aureomycin, penicillin, etc. Treatment for the latter and any fulminating acute reaction, regardless of the etiology, should be conservative and cautious. Local applications may be used of warm witch hazel compresses, sitz baths, soothing lotions such as C.Z.O., calamine, etc., and later local anesthetic ointments and cremes. Irritating soaps, toilet tissue, contraceptive cremes, certain types of clothing, and any other source of irritation must be removed.

Pruritus associated with venereal diseases subsides with proper treatment of the condition and requires only proper cleanliness and simple antipruritics.

The treatment for Trichomonas brings forth many suggestions and includes hypertonic salt solution for douching, devegan, floraquin and many other remedies. Eradication of the associated pyogenic infections must also be accomplished and the normal pH of the vagina restored.

Oxyuris is more often found in the younger age group, is readily diagnosed, and requires proper hygienic measures in addition to E.C., gentian violet tablets or other therapeutic agents.

\*Read before the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953, as one of the papers in the Obstetrical and Gynecological Symposium.



Pediculosis may be treated with mercury ointment, copper solution, etc.

Tinea responds to salicylic-benzoic acid preparations, but must be treated conservatively during the initial phase. Benzyl-benzoate in the form of an emulsion usually has been added to the usual sulphur treatment of scabies.

Leucoplakia and kraurosis designate atrophy, wrinkling and discoloration of the skin. Contraction and constriction signify kraurosis. The possibility of the development of carcinoma must be remembered; however, the treatment is primarily conservative. Relief of pruritus and discomfort and daily lubrication are the fundamentals of treatment. Vitamin A

30,000 to 50,000 units t.i.d. are helpful if hyperkeratosis is present. 10 gr. of ichthyol in one ounce of castor oil used locally each day is of value. A lotion of equal parts of 8% soda and glycerine may be used two or three times daily. Estrogens locally may have a place providing systemic effects are not allowed to become manifested.

As a final reminder, remember that leaking mineral oil is a frequent cause of pruritus ani and essential pruritus is a most difficult diagnosis; the husband may have trichomonads in the prostate; improper douching may do harm, and X-ray therapy is rarely indicated for pruritus vulvae.

---

### Hormone Facial Creams.

The addition of hormones to facial creams does not result in any greater improvement in the appearance of the skin than would the continued use of an ordinary emollient cream, according to Dr. Howard T. Behrman, a New York dermatologist.

Dr. Behrman, a member of the American Medical Association's Committee on Cosmetics, based his conclusions on a study of 27 women between the ages of 35 and 65 years who, for a period of three months, applied a hormone cream to one side of their face and an ordinary facial cream to the other side each night before retiring. "No appreciable difference was visually observed in the side treated with an estrogenic hormone cream as compared with the side treated with either the identical base without hormones or a commercial night cream having a very similar composition to the hormone cream," Dr. Behrman wrote in the (May 8th) *Journal of the American Medical Association*. "In fact, the only change of significance observed on both sides of the face was encountered in the subjects with dry skins,

namely, in subjects in whom the skin felt and appeared less dry if either cream was constantly employed.

"This study demonstrated that noticeable improvement in the appearance of the skin can be obtained through regular use of an emollient cream in women with dry skins. This study did not demonstrate that the addition of hormones to such emollient bases increased this improvement to any discernible extent."

"The cosmetic industry by and large has had a progressive and farsighted policy that has included more extensive laboratory studies and pretesting of new products, improved educational standards for its technical personnel, and a self-imposed policing of its manufacturing aspects.

"It is recognized and accepted that a certain amount of puffery is necessary in the field of promotional cosmetic advertising. However, some manufacturers of creams containing estrogens have made claims, either directly or by innuendo, that overstep these limits."

CLINICOPATHOLOGICAL CONFERENCES  
of  
The Medical College of Virginia Hospital

Prepared and Edited by  
GORDON HENNIGAR, M.D.\*  
W.M. R. KAY, M.D.\*\*

Case #126

A 74 year old white female was admitted to M. C. V. Hospital with a chief complaint of pain in her chest of four hours' duration. The pain was substernal and described as dull and hard with radiation to both shoulders, down the arms, and into the fingers. The pain had begun shortly after a light lunch and was not associated with any unusual activity. The patient had previously had "indigestion" for several years and had not thought the present attack of pain was unusual until it persisted with radiation into the arms. Her local physician was called and administered morphine and atropine. The pain was not completely relieved and the patient was then sent to the hospital.

Her past history and systems review were essentially non-contributory.

*Physical Examination:* Temperature 97.4 (R), pulse 116, respirations 16, blood pressure 170/115. She was well developed, rather poorly nourished, and in no acute discomfort. The pupils were constricted and reacted sluggishly, and the fundi were not adequately visualized. The neck veins were mildly distended. The cardiac PMI was in the 5th left interspace just outside the mid-clavicular line. The rhythm was regular.  $P_2$  was accentuated. No murmurs were noted. The remainder of the physical examination was essentially negative.

*Laboratory Data:* WBC 13,000 with 85% polys. Hemoglobin 14.6 grams. Sedimentation rate 31 mm./hr. Urinalysis: Specific gravity 1.035, albumin 1+, sugar 1+, acetone slightly positive; microscopic, many bacteria and amorphous material, 2-3 WBC and many epithelial cells. BUN 18 mgm.%. Serology negative.

An electrocardiogram revealed depressed ST segments in Leads I, AVL and AVR and elevated ST in Leads II, III, and AVF. Repeated tracings show-

ed progression of these changes with development of nodal extrasystoles.

The patient was sedated and given oxygen. The next day her blood pressure had fallen to 90/60. She complained of nausea. A Grade I apical systolic murmur was noted. On the third hospital day the urine output became negligible. Following parenteral fluids the urine output gradually increased and was 810 ccs. on the fourth hospital day. The blood pressure remained around 90/60. The neck veins became increasingly more distended. The apical systolic murmur became loud and harsh and persisted. The patient became unresponsive. The skin became cold and moist. The blood pressure frequently was unobtainable. The pulse rate increased and became grossly irregular with a rate of around 92-100. The patient's course was progressively downhill. The BUN rose to 112 by the seventh hospital day and then fell to 48 by the tenth hospital day. On the ninth hospital day, the patient had two episodes of severe dyspnea with periods of respiratory arrest, and pulse dropping to 32 to 40 per minute during these episodes. The lungs, however, remained remarkably clear throughout. She developed mild sacral and ankle edema. The patient's temperature averaged around 102-103°. She continued downhill and died on the thirteenth hospital day.

CLINICAL DISCUSSION BY  
DR. DAVID J. GREENBERG\*

The history is that of a 74 year old white female with what is intimated to be the progressive onset of precordial pain with radiation to shoulders, arms, and fingers. The pain was so severe as to be only partially relieved by the administration of morphine and atropine but subsided within four hours. This type of pain was apparently not foreign to the patient (though the severity and radiation were) and had previously been labeled indigestion. Physical examination revealed hypothermia, tachycardia of 116,

\*Associate Professor of Pathology, Medical College of Virginia.

\*\*Assistant Professor of Clinical Medicine, Medical College of Virginia.

\*Associate in Medicine, Medical College of Virginia.

systolic and diastolic hypertension of 170/115, pupils affected by morphine, slight neck vein distention, slight cardiomegaly, and an accentuated P2. Laboratory data showed a WBC and CSR consistent with tissue injury and 1-plus glycosuria, probably as a reflection of stress as no evidence for diabetes developed. Transient glycosuria with cerebrovascular accidents and myocardial infarction as a manifestation of stress is a not uncommon finding and has led some observers to label it latent diabetes. As there is no suggestion of vomiting with subsequent dehydration and/or starvation, the 1-plus acetoneuria might have been caused by a drug taken initially by the patient for indigestion. Salicylates, for example, will give a false positive test for acetone. Urinalysis is important in that good concentrating ability was present and probably rules out intrinsic renal disease of any importance. Proteinuria and glycosuria will increase the specific gravity, especially the latter, so the true specific gravity is probably 1.030. At such a high concentration, this is of no importance but is sometimes of value in interpreting tests of concentrating ability. No hematuria was noted, and serology was negative. An initial electrocardiogram revealed the early changes of an acute posterior myocardial infarction, i.e., elevated ST II, III, and AVF, and depressed ST segments in I, AVL, and the right precordial leads. Three days later, Q-waves of posterior infarction evolved as did 1-degree ht. block, evidence of a conduction disturbance in the right bundle, and occasional nodal premature contractions.

On the following day, the blood pressure had fallen to 90/60, and a grade I apical systolic murmur appeared. Thereafter, the murmur became harsh and loud; state of shock and reversible renal insufficiency wavered; and the patient expired after running a temperature of 102-103 but only after early signs of right heart failure and remarkable absence of pulmonary congestion. There were two episodes of severe dyspnea with periods of respiratory arrest during which a bradycardia of 32-40 was noted. As nodal premature contractions were present, this might have been nodal rhythm; although with this, the rate is usually 40-50. At any rate, at these times, an already diminished cardiac output that had previously been compensated by a tachycardia was further comprised with resultant severe cerebral anoxia.

There is nothing inconsistent with the diagnosis

of myocardial infarction even before the electrocardiogram. Pain such as this lasting even one-half hour is myocardial infarction until proved otherwise. And a loud P2 in spite of systemic hypertension, together with venous distention, indicates that the heart has had a severe strain and is at least threatening to fail. The past history, too, makes one think of coronary artery disease. I will stress this more later.

Myocardial infarction is a pathological state—the end result of marked inadequacy of coronary blood flow. It typically occurs at rest, as there is usually the sudden occlusion of a coronary vessel. Infarction can occur without a sudden stoppage when increased demands of the myocardium overtax the collateral circulation that follows a former occlusion. Such a situation probably explains those cases that do occur after marked effort. This case taken as a whole suggests an acute occlusion, the importance of which I will discuss later.

Approximately 95% of occlusions are on an atherosclerotic basis. However, several of the rarer causes are suggested by this protocol and should be ruled out.

A dissecting aneurysm may rarely occlude a coronary artery by extension and hematoma formation or distortion of coronary ostia. The pain of the dissection itself is usually a sudden, severe, tearing precordial or retrosternal pain that radiates more widely than the pain of infarction—i.e., to head, back, epigastrium, or legs, depending upon the course of dissection. While hypertension is commonly present in both conditions, it is rarely absent with a dissecting aneurysm. Sustained blood pressure is more common after a dissection but in coronary occlusion of the usual type may fall after hours or days, although an initial fall is usually noted. A murmur can also follow the dissection because of damage to the aortic ring and cusps. This murmur is aortic in position and diastolic in time. Again, renal insufficiency may follow because of interference with renal arterial flow. Hematuria, however, usually present, and insufficiency is not as liable as the pre-renal type with which we are dealing in this case.

One thinks of subacute bacterial endocarditis in view of a developing murmur and the febrile course. Embolic coronary occlusion can occur from disease of the aortic valve and even more rarely from the mitral valve on an underlying rheumatic and/or



luectic basis. There is no real evidence for this diagnosis. The patient was in good health prior to the present illness and no other embolic phenomena were noted.

Bland thrombi forming on luectic aortic lesions with subsequent coronary embolization come to mind. They usually occur in young people, are an immediate cause of death, and as with other types of cardiovascular lues are accompanied by positive serology in approximately 80% of cases.

embolization. Extension of infarction and/or neurogenic mechanisms might explain the state of shock. Neither arrhythmia nor tachycardia are apparently present when the patient's course suddenly worsens. The most significant finding is the first appearance of an apical systolic murmur. This might represent left ventricular dilatation, but it becomes loud and harsh. This first appearance or the accentuation of a previously existing murmur in a patient with a recent myocardial infarction suggests two condi-



Perforation of the interventricular septum following myocardial infarction. Ruler passes through defect.

Bland blood thrombi which form on aortic atherosclerotic plaques and embolize to the coronary arteries are a distinct possibility in this case. They might be ruled out only by the rarity with which they occur.

Finally, polyarteritis, Buerger's disease, and cardiac tumors are mentioned only because their absence in mind precludes the chance of ever making such a diagnosis.

Let us assume then that a sudden occlusion has occurred on an atherosclerotic basis.

Why does a patient who was apparently doing even better than expected suddenly take a course for the worse on the day following infarction? This is rather early for complications such as pulmonary

tions—a ruptured papillary muscle or spontaneous cardiac rupture. The sudden onset or change of a murmur may also follow ruptured valves and chorda tendineae, but these conditions rarely if ever occur following myocardial infarction.

Rupture of a papillary muscle usually follows infarction, though it can occur with severe coronary insufficiency and so-called subendocardial infarction alone. The subendocardium in general and papillary muscles in particular are the true end-organs of the coronary arteries and feel inadequacy first. The murmur that follows rupture is quite consistent with that described in the protocol—is harsh, loud and apical. At times, sounds mimicking a friction rub are heard and occasionally there is an accompanying

diastolic murmur. Cases have been reported in which no murmur was heard, but the rapidity with which death ensues probably explains why most are not heard. Acute pulmonary edema usually follows rapidly and death occurs in a matter of hours or days. Patients have survived for several months. No thrill has ever been reported in a case of a ruptured papillary muscle. It has been reported in only one case of incomplete rupture and was attributed to eddies set up by remaining strands of tissue. This is a most important point, and I should like to ask if any mention of a thrill was made in the hospital record.

Finally, spontaneous cardiac rupture is a distinct entity to be considered.

To begin with, spontaneous cardiac rupture occurs either through the ventricles into the pericardium, through the interventricular septum, and very rarely through the auricles. Such a catastrophe might be considered in this patient even before the second hospital day when her course indicated the dramatic occurrence of a tragic event. Pathological and clinical profiles have recently been stressed by Wessler, Zoll, and Schlesinger<sup>1</sup> after a study using the lead agar injection technique. Ruptured hearts were compared with acutely infarcted hearts coming to post-mortem examination for other reason. The pathological requirements were the following:

1. A fresh coronary occlusion. This was touched on previously.
2. A recent myocardial infarction, certainly not lacking here.
3. A myocardial infarction which is transmural. The present case is consistent with such a picture. Laboratory data shows a moderate response to tissue injury and there is the electrocardiogram appearance of Q-waves. We usually feel that a pericardial rub indicates transmural infarction, but this is present in only approximately 25% of cases to begin with. And incidentally, it has been felt in some circles that the formation of pericardial exudate might protect the heart from rupture. There is apparently no evidence for this.
4. A myocardial infarction which is poorly supplied by collateral vessels.
5. A myocardial infarction which fibrosis is absent in at least one area.

The clinical predisposition includes usually a state of preexisting hypertension that is maintained after infarction, no previous history of myocardial in-

faction or congestive heart failure, and occasionally a history of marked effort prior to rupture. Age is significant only in that hypertension is more frequent with advancing years, and sex is important in that women are more likely to show the combination of hypertension and lesser degrees of damage to the coronary arteries. Fever and leucocytosis are not important in this series although it has been suggested by other authors that the proteolytic effect of degenerating white blood cells might play a part. Because those patients who died without rupture usually showed some other major complication as opposed to this group in which this one major complication was lethal, I wonder whether this is not at least an important relative factor.

Interestingly enough, the presence of angina had no bearing nor did cardiac size or electrocardiographic findings. However, I will individualize on this patient. Why some individuals suffer anginal pain only after eating is not quite clear. This woman's state of nourishment does not suggest eating as her most strenuous activity. Distention of abdominal viscera might have provoked reflex coronary vasoconstriction, and the latter might be the most important factor in the production of angina in this particular person; for I do not anticipate marked atherosclerotic changes in the coronary arteries while moderate enlargement of the heart probably is present. These factors, when present together, rather than a significant amount of vasoconstriction, might produce angina as we usually know it. Marked coronary atherosclerosis and anemia have been found to be the most important provocations of collateral circulation and fibrous tissue formation. I should not like to see a great deal of fibrous tissue in this heart.

Now what application and meaning can we learn from this? First of all, spontaneous cardiac rupture does not occur in badly damaged hearts because of the protecting influence of fibrous tissue. Our history includes none of the factors indicative of manifest cardiac damage, such as failure, previous myocardial infarction, or electrocardiographic changes not of an acute nature. And secondly, factors producing either a continual or intermittent increase in left ventricular pressure operating on a suitable pathological basis make the likelihood of spontaneous cardiac rupture not remote. Indeed, 7-9% of people dying after myocardial infarction show a ruptured myocardium, either into the pericardial cavity or

through the interventricular septum. We are all familiar with the high incidence of rupture reported from coroners' cases and from mental institutions. In such cases, the difficulty of diagnosis and/or the lack of appreciation of pain make the incidence of rupture exceedingly high. Therefore, even in these days of bed-chair coronary treatment and consciousness of early ambulation, no exertion should be allowed for at least three weeks. Mallory, White and Salcedo-Salgar<sup>2</sup> have demonstrated that a substantial scar begins to form in this time. While rupture usually occurs between the fourth and eleventh days, it may occur the first day and may occur after the third week. In the latter case, one can assume an extension of infarction. And because these patients are the ones who look best, less vigilance might be paid, whereas in reality it should be even more strictly enforced.

Now, where did this heart rupture? Unless one is fortunate or unfortunate enough to be listening to the heart, a rupture into the pericardium is usually diagnosed on the autopsy table. Rarely, if bloodclot seals the tear, the patient may live for hours or days. However, there is no murmur. Recently, several clinical reports have stressed the occurrence of blood in the pericardial cavity that came from the granulation tissue of healing pericarditis while the patient was under the influence of dicoumarol. Varying degrees of tamponade resulted.

The murmur of interventricular rupture is not unlike that of the Roger's murmur. It is a harsh, loud systolic murmur usually of maximal intensity in the fourth and fifth intercostal spaces to the left of the sternum, widely transmitted, and accompanied by a systolic thrill in 50% of cases. As previously mentioned, the thrill is so characteristically absent in a ruptured papillary muscle that its presence is virtually diagnostic of the former. With a large defect, a diastolic murmur may be present but has usually been ascribed to the formation of a ventricular aneurysm. The murmur in this case is statistically more characteristic of a ruptured papillary muscle, but the murmur of a ruptured septum is at times best heard at the apex and even more rarely at the base.

Of greater importance, however, when rupture of the interventricular septum occurs, a rather distinctive clinical picture appears. The key to the correct diagnosis is the course. The condition of the patient worsens, but death does not usually ensue

as quickly as it does after papillary muscle rupture or rupture through a ventricle. Few patients live longer than one month, but survival has been reported of almost five years. And acute pulmonary edema does not usually occur. Indeed, as in the present case, right-sided failure usually ensues. The occurrence of right-sided failure after first infarction is rare at such an early stage and usually follows failure of the left ventricle. Those hearts that show a predominance of right-sided failure already have advanced disease of the right ventricle. The lungs in this case have remained remarkably clear. Now why the right heart fails so quickly after rupture of the septum has been attributed to various factors. The sudden imposition of unusual strain late in life on an aging right ventricle might be the answer. In longer survival than occurred in this case, septal bulging with a Bernheim-like syndrome has been suggested. Another very interesting concept concerns the six well-defined muscles of the heart. Apparently the deep sinospiral muscle contributes 75% of the muscle substance of the right ventricle. Since it can be injured to a state of incapacity even in the left ventricle and interventricular septum, this might play a part.

In conclusion, I feel that the immediate cause of death is either a ruptured papillary muscle or interventricular septum. The murmur is inconclusive. Because the patient fulfills the pathological and clinical criteria for rupture of the heart and dies not suddenly but in approximately ten days of predominantly right ventricular failure, I favor the latter.

My diagnoses are, therefore, the following:

1. Hypertensive and arteriosclerotic heart disease with moderate cardiomegaly and not far advanced coronary atherosclerosis.
2. Acute coronary occlusion with myocardial infarction.
3. Rupture of the interventricular septum.
4. Stigmata of congestive failure of the right side.
5. Benign nephrosclerosis.
6. ? Hypostatic pneumonia and pulmonary emboli with infarction.

*Clinical diagnosis:* Coronary occlusion with myocardial infarction and rupture of the interventricular septum.

*Anatomical diagnosis:* Myocardial infarction of posterior interventricular septum with rupture of the septum.



## PATHOLOGICAL DISCUSSION BY

DR. GORDON HENNIGAR

The body was that of an elderly white female, showing no outstanding features on external examination. The neck veins were distended, and the veins over the chest and arms were prominent. Cyanosis was absent.

The right pleural cavity contained 650 ccs of clear, dark yellow fluid, while the left cavity contained 500 cc. of similar fluid. The pericardial fluid was normal in quantity but sanguineous in color.

The heart weighed 275 grams and showed a moderate amount of adipose tissue in the epicardium. Numerous subepicardial hemorrhages were seen, most extensive over the lower portion of the right atrium and the upper area of the right ventricle, extending lateral posteriorly to lateral anteriorly. The left ventricle appeared slightly dilated. On sectioning of the heart, the left ventricular myocardium measured up to 1.5 cm. in thickness, while the right ventricular myocardium measured up to 0.2 cm. The myocardium of the anterior wall of the left ventricle, the posterior 2 cms. of the interventricular septum and the previously described areas of the right atrium and ventricle showing hemorrhages in the epicardium, showed mottled yellow to brown discoloration. Microscopic sections through these areas showed hemorrhage, necrosis, leukocytic infiltration, increase in fibrous tissue and hemosiderin laden histiocytes. The myocardium in these areas showed infarction of almost the entire thickness of the myocardium. An oval shaped defect of the upper interventricular septum was present measuring up to 1.5 cm. in diameter and oriented to the longitudinal direction of the septum. (Figure I.) The defect had a rolled, rough granular margin and opened into the right ventricular cavity 2 cm. below the tricuspid valve. Section through the margin of this defect showed infarction of tissue compatible with

the clinical duration of the precordial murmur and marked venous distention. The margin showed necrotic muscle, moderate infiltration by polymorph leukocytes, occasional lymphocytes, pigment laden macrophages, and as yet no infiltration by eosinophils or evidence of removal of necrotic tissue with formation of cicatrix.

Extensive mural thrombi were present over the areas of infarction in the right atrium and ventricle, and those thrombi showed early organization microscopically. The right coronary artery was the seat of marked atherosclerosis, and thrombosis was present over subintimal hemorrhage causing complete occlusion of the artery. The left coronary artery showed no occlusion or thrombosis of the vessel.

Evidence of cardiac failure and increased venous pressure proximal to the right atrium were present in the other organs of the body both grossly and microscopically, as evidenced by moderate pulmonary edema and central lobular atrophy and congestion of the liver.

## FINAL ANATOMICAL DIAGNOSIS

Infarction (recent) of posterior interventricular septum with rupture of septum. Infarction (recent) of right atrium and ventricle, with mural thrombi. Thrombosis of right coronary artery with hemorrhage into an atheromatous plaque. Acute congestion of lungs and liver. Bilateral pleural effusion. Generalized arterio-arteriolosclerosis, moderately severe.

## REFERENCES

1. Wessler, S., Zoll, P. M., and Schlesinger, M. J.: The pathogenesis of spontaneous cardiac rupture. *Circulation* 6: 334, 1952.
2. Mallory, G. K., White, P. D., and Salcedo-Salger, J.: The speed of healing of myocardial infarction: a study of the pathologic anatomy in seventy-two cases. *Am. Heart J.* 18: 647, 1939.

## MEDICO-LEGAL NOTES

## Heat Reaction States\*

Twenty-eight deaths due to heat stroke were reported by medical examiners in Virginia during the years 1952 and 1953. With the onset of what some climatologists predict will be another severe summer, a discussion of the medico-legal implications of deaths due to heat-reaction states seems appropriate.

Deaths resulting from heat stroke are reportable to the medical examiner. They are considered as accidental deaths due to a physical agent of the external environment. The importance of a proper determination of the cause and manner of such deaths can be appreciated since it may mean the payment of double indemnity insurance or Workmen's compensation to the family of the decedent.

The aggravation of existing chronic cardio-vascular disease or of debilitating conditions in elderly individuals by summer "heat-waves" is well known, but these deaths are not accepted as true cases of heat stroke by the local medical examiners. They more properly should be signed out as due to the underlying disease condition present in the individual unless they show the criteria of heat stroke which will be described later.

The prompt recognition by the physician of the difference between a case of heat exhaustion and one of heat stroke is imperative. Heat stroke is one of the few true medical emergencies and requires prompt heroic treatment if the patient is to have any possible chances of survival. Furthermore, the treatment of these two conditions is radically different.

Extreme summer heat may produce one of at least three primary symptom complexes. These are heat cramps, heat exhaustion and heat stroke. Heat cramps are muscular cramps of the extremities and abdomen due to excessive salt loss. The condition can be readily relieved or prevented by ingestion of salt tablets or salt solutions on the job. There is no elevation of body temperature and no significant mortality.

Heat exhaustion is a state of collapse due to peripheral vasomotor failure. Faintness, usually with the subjective sensation of palpitation is the predominant symptom. Profuse sweating and marked salt depletion are contributing factors. It usually

results from physical exertion in a hot environment when vasomotor control and cardiac output are inadequate to meet the needs of increased skin circulation in addition to muscle and cerebral circulation. The skin is usually cool and moist and the body temperature is normal or only slightly elevated in some cases.

Removal of the individual to a comfortable environment and supplying of mildly salted fluids by mouth generally suffices for a complete recovery. However, in the older patient with a prolonged response to recovery, the presence of some cardio-vascular disease can be suspected. If death ensues in such a person and the body temperature is normal or only slightly elevated and the skin moist, it should not be accepted as one due to heat.

Susceptibility to heat exhaustion varies with physical condition although it does occur in those deemed in the most fit state of health. Alcoholism, old age and chronic cardio-vascular disease are the most frequent pre-disposing factors.

Heat stroke, also known as heat hyperpyrexia, is due to prolonged exposure to a hot environmental temperature with relatively high humidity. Above 95 degrees Fahrenheit sweating is the sole method of heat dissipation. Conduction, convection and radiation of heat from the body under these hot, humid conditions no longer is effective in eliminating excess body heat and after a time the central heat-dissipating mechanism breaks down. As a result of this, sweating ceases, causing a greater accumulation of heat within the body.

Heat stroke may occur then with dramatic suddenness after the cessation of sweating, producing the classical picture: a person working under hot humid environmental conditions suddenly stops sweating and collapses unconscious or may have premonitory headache, feeling of extreme heat, weakness, nausea, faintness, mental confusion, staggering gait or convulsive seizures. The skin in almost all cases will be *hot and dry*.

In a series of 125 fatal cases in the Armed Services three general types of onset of heat stroke were found: a) acute, without apparent warning (71%), b) relatively acute, with brief prodromal symptoms (21%) and, c) insidious, with premonitory signs and symp-

\*Contributed by: Harold L. Beddoe, M.D., Fellow in Legal Medicine, Office of the Chief Medical Examiner, Richmond, Virginia.

toms lasting sometimes for several days (8%). Death occurred in less than 24 hours in 70% and in from 1 to 12 days in the remaining 30%. When death occurred in less than 48 hours early coma or delirium persisted until death. When the illness lasted longer than 48 hours the course was characterized by early coma which tended to clear up partially until a terminal relapse supervened, or by slow progression and late coma. The pathologic changes in the central nervous system were most conspicuous and consisted of degenerative changes in the neurons, congestion, edema and petechial hemorrhages. Hemorrhages in other organs and tissues were common and were considered due to shock while the cellular degenerative changes were attributed to the effects of excessive heat.

Treatment is prompt and vigorous and aimed at lowering the body temperature to a safe range (102°) as rapidly as possible since brain damage appears to be related to both temperature and time. Packing the entire body in ice packs, immersion in ice water and evaporative cooling by spray and fans are all methods recommended by various authorities. Massage of the extremities is advised to prevent peripheral vascular stagnation and to allow for more rapid transfer of heat. Intravenous fluids should be used with care to prevent pulmonary edema. Salt

loss is not usually a prime factor in heat stroke so no efforts to replace salt should be made during the emergency phase of treatment. Further treatment measures are readily available and will not be considered here.

Heat stroke may be confused with other diseases of the central nervous system producing coma and hyperpyrexia and occasionally with overwhelming sepsis without external manifestations. Heat stroke is also erroneously diagnosed in cases of heat exhaustion complicating an existing cardio-vascular or debilitating condition which ordinarily would be listed as the primary cause of death.

Although occasional cases of heat stroke are described without the classical hot dry skin, absence of sweating and hyperpyrexia, it would be more accurate to include in this diagnosis only those cases demonstrating these signs and with a temperature over 106°. Rectal temperatures are easily taken after death and are recommended to support the diagnosis. Temperatures over 111° have been recorded in cases reported by local medical examiners even 4 to 6 hours after death. With such evidence to support the diagnosis the physician will help insure more accurate vital statistic records and prevent possible delays in settlements of estates, insurance policies and Workmen's compensation claims.

### New Books.

Below we list some of the new books received at the Tompkins-McCaw Library of the Medical College of Virginia, Richmond. These are available to our readers under usual library rules.

American College of Surgeons, 1953 directory. 1953.

Arnold—Modern concepts of leprosy. 1953.

Boies—Fundamentals of otolaryngology. 2nd ed., 1954.

Bremer—Some problems in neurophysiology. 1953.

Campbell—Manic depressive disease. 1953.

Child—The hepatic circulation and portal hypertension. 1954.

Conant and Smith—Manual of clinical mycology. 2nd ed., 1954.

Emmett—Catalysis, Vol. 1, Fundamental principles, pt. 1, 1954.

Herriott, ed.—Symposium on nutrition. 1953.

Hughes—Pediatrics in general practice. 1st. ed., 1952.

Lerner & Lerner—Dermatologic medications. 1954.

Lucas—Symptoms and treatment of acute poisoning. 1952.

Matheney and Topalis—Psychiatric nursing. 1953.

Moritz—The pathology of trauma. 2nd ed., 1954.

Recent progress in hormone research. 1954.

Reddish, ed.—Antiseptics, disinfectants, fungicides, and chemical and physical sterilization. 1954.

Surgical forum. Vol. 4, 1953, 1954.



## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### **The Role of the Psychologist in the Mental Hospital\***

The psychologist working in a mental hospital feels that he can best function in three primary areas of his profession: in producing research, in helping in the assessment of personality, in assisting in treatment of functional mental and emotional disorders through psychotherapy. Another important part of each psychologist's work is his interested participation as a member of the hospital community. Many mental institutions are understaffed and it may not be possible for the psychological staff to work actively in all three areas, research, description of personality, psychotherapy; however this article will deal with an ideal situation, and will describe how the psychologist might regard his own role in a fully staffed mental hospital.

First and perhaps most important of all in the long view is the field of research. Diagnosis and treatment at the present time are based largely on the findings of scientists of the past. Some of the knowledge utilized in evaluating and treating the personality disorders derives from folk wisdom, some of it is part of our cultural heritage, stemming from philosophical and religious ideas developed centuries ago, but much of it is based on scientific discoveries, made by individuals who were capable of objective handling of observation and fact and who were able to classify and analyze what they observed. From observation, hypothesis were formulated; in some cases they were tested, found to be incorrect, and were discarded, while in other cases they were tested and found to be correct. From them, new hypothesis were developed, checked, and accepted or discarded. It is this fund of knowledge obtained by scientific observation and research in the past which forms the basis for nearly all of the present thinking in the field of abnormal psychology. But though much has been learned, there remains a tremendous area yet to be explored: mysteries of the human personality, so-called normal and abnormal, continue to confound those who specialize in the study of human behavior. It is here that the psychologist should have a unique contribution to make.

Firmly grounded in the experimental method of pure science, and aware of the importance of objectivity, he should be well equipped to undertake research in the complexities of personality.

One of the major difficulties in research in clinical psychology is that the methodology of the past is no longer adequate for certain problems of the present. The human personality used to be seen as a more or less fixed cluster of traits and attitudes, but now it is regarded as a dynamic process, a reacting, moving configuration as the human organism continually adjusts to himself and the world around him. One can work with individual segments of personality, plucked out of time, halted, motionless; but how meaningful are these temporarily suspended portions, separated from the constantly adjusting whole? Here the approach should be molar rather than molecular. The emphasis must be on the gestalt, on the organism in the total environment, on the whole organism constantly moving toward adjustment, toward equilibrium. Research in this very complex area has been hampered by rigid methodology, still appropriate for much scientific investigation but which no longer fully meets the needs of research in clinical psychology. Fresh, clear thinking is essential in the working out of new procedures and many scientists are now devoting their efforts to this phase of psychological investigation. As a different methodology is developed, retaining the scientific strength of past techniques and adding the flexibility and new dimensions of the present, research into the complexities of human behavior will become increasingly valuable.

A second important field in which the psychologist works is in the assessment of personality. Here again the emphasis is on the total organism. Numerous tests have been developed to assist in the study of personality, and some of these devices are widely used in mental hospitals. There are two main categories, intelligence tests, designed to measure the individuals' functional level of mental ability, and personality tests, now made up primarily of projective techniques. These projective tests in the hands of a skilled clinician have been found extremely helpful in the study and evaluation of the complex adjustive processes which make up the personality.

\*Article prepared by Penelope Lewis, M.A., Psychologist, Western State Hospital, Staunton, Virginia.

From a battery of these tests, and from interviews and observations and material garnered from other departments of the hospital, the psychologist offers a description of the interplaying intellectual and emotional adjustive activities which constitute personality. Although the psychologist's report is utilized by the hospital staff for establishing the diagnosis of the individual patient, it is felt that description is of more value than classification and that it is more important to understand why a person does something than to give what he does a label. An awareness of the reasons for a patient's behavior should be of tremendous help in facilitating his treatment.

A recent trend which should be noted here is the new emphasis on the "positives" in a given situation. Satisfactory description of the personality should always include both positive and negative factors. Historically the approach to the psychoses and the personality disorders has always featured the differences, the peculiarities, the "abnormalities". There has been a marked tendency to use "abnormality" as a frame of reference; today there is a widening trend toward considering "normality" the more proper frame of reference. From this new perspective the therapeutic team is better able to evaluate the whole individual and better able to assist him toward a happier and more meaningful life, toward a life of greater fulfillment.

The field of psychotherapy is a third area in which the psychologist many function. Like other members of the therapeutic team of the mental hospital, he may wish to participate in treating the patient. Depending on his training, ability, and his own special skills, he may offer psychotherapy to certain patients for whom it is felt this form of treatment might be beneficial. Here it is important that the psychologist remain in his own field of competence and work only with the functional aspects of the case. The medical and neurological factors may be of great interest to the psychologist, in fact he should be acutely aware of them since his orientation is primarily functional, but they lie outside of his chosen specialty and must of course remain in the hands of the physicians. There are many approaches to psychotherapy: it can be offered to a group or to an individual; it may be directive or non-directive, it may be primarily supportive or interpretive in

nature; it may be superficial or it may go deeper into the psychological organization of the patient. Each therapist tends to move toward that approach which he has found especially effective and helpful, and with which he is most comfortable and therefore most proficient.

Another way in which the psychologist should function, although it is not officially part of his responsibility, is as an active, participating citizen in the hospital community. It is perhaps more in this role than in any other that he will be able to expand his own horizons, broaden his thinking, and come to be aware emotionally as well as intellectually of the vitality and verity of the molar approach. As a member of the hospital community, he may come to see the patient and his problems from many vantage points; he may become increasingly aware of the viewpoint of the occupational therapists, the attendants, the physicians, the nurses, the psychiatric social workers, the chaplains. The psychologist becomes acquainted with the slants of the other members of the staff and at the same time is able to share with them some of his own insights.

One of the serious difficulties of the modern thinker involves becoming proficient in a special field of knowledge without losing sight of the larger picture. Human knowledge is much too great for one person to acquire and understand at the present time; the Renaissance man can no longer exist; and specialization with its rigid compartments has become accepted for practical reasons. However with the creation of these rigid compartments has come a tendency to ignore the fact that they were set up by people in order to increase efficiency. The interrelations, the fact that compartmental lines must be crossed, the recognition of continuous rather than discrete units which cannot move beyond the man-made boundaries, tend to be overlooked in this fallacious order which we have created. With the setting up of special areas for the convenience of thinking, we have to some extent narrowed our thinking. We recognize the phenomenon of "tunnel vision" medically; are we all partially guilty of "tunnel thinking"? Each member of the mental hospital team has an opportunity to try to enlarge his thinking by taking an active role as a participating citizen in the hospital community.

# Medical Society of Virginia Cancer Committee

*Chairman, George Cooper, Jr., M. D.*

Medical School Building, University, Va.

Reprints of this and preceding Bulletins may be obtained from this office

June 1, 1954

## Case Report

A 47 year old man went to his physician, complaining of mucopurulent discharge from the left nostril and pain in the left cheek. The symptoms were of about three months' duration and were growing progressively more severe, but there was no history of acute upper respiratory infection.

The physician examined the patient and told him he had a polyp in the left nostril. He treated him for six months with nose drops, during which time the symptoms continued to grow slowly worse.

The patient finally sought the advice of another physician who immediately referred him to an otolaryngologist. X-ray studies of the paranasal sinuses demonstrated an opaque left antrum and bone destruction in its lateral and superior walls. Biopsy of the polyp was reported adenocystic basal cell carcinoma.

Vigorous radiation therapy to the left face was followed by complete remission of local manifestation of cancer. For five and a half years, the patient remained completely well. Then he began to complain of weakness and loss of weight. A chest x-ray revealed numerous bilateral pulmonary metastases. Six months later, he died.

*Comment:* The fate of the cancer patient lies in the hands of the first physician who sees

him. No amount of knowledge, skill or treatment can save a patient when the first physician he consults gives him advice which delays diagnosis and treatment until his cancer has become a systemic disease.

No one will ever know what the effect on the outcome of the above case might have been if the first physician had been more alert. At the very least, he delayed diagnosis and treatment for six months.

There were three faults:

1. The physician's index of suspicion for cancer was much too low. Obviously, the doctor who does not think of cancer will never diagnose it.

2. He made a pathological diagnosis (benign polyp) without a biopsy. Incidentally, the State Health Department through its Bureau of Cancer Control, has brought tissue diagnosis within easy reach of every physician in the State. There is no longer any reason to omit a biopsy, regardless of the physician's location or the patient's financial status. Anyone unfamiliar with the mechanics of using this service is urged to write to Dr. Mason Romaine, Director, Bureau of Cancer Control, State Health Department, Richmond.

3. In spite of the lack of response to treatment, the physician did not review the case or attempt a revision of his initial impression.





NOTES  
ON  
PULMONARY TUBERCULOSIS\*  
Standard Diagnostic  
Study (IV)  
History, Physical Examination,  
Gastric Lavage

Standard Diagnostic Study for confirmation or exclusion of pulmonary tuberculosis includes consideration of the following components; (1) Personal and family *history*, (2) evaluation of *symptoms*, (3) *physical examination*, (4) *x-ray* examination (including serial and special position films, when indicated) (5) examination of *sputum* (including culture) for Tubercle Bacilli, (6) culture of *gastric* washings (particularly where there is no expectoration), and (7) the *tuberculin test*.

\* \* \* \*

*History:* Inquiry will be made concerning the patients symptoms (if any), including a survey of past complaints as well as those that may be present at the time the physician is consulted. (See January issue, *Virginia Medical Monthly*) Arrangements should be made to secure any previous survey films or other x-rays of the chest, for comparison.

The patient will be questioned as to recent or remote serious illness, accidents, unusual physical strains or emotional stress incident to employment or otherwise, or anything that might suggest a reasonable explanation for a temporarily or chronically lowered constitutional resistance to disease in general or to tuberculosis in particular.

Although it is well known that tuberculosis is an infectious disease and is not inherited, a careful review will be made of the *family history*, for children brought up in households where one or more members have or *have had* tuberculosis are usually exposed to repeated and often massive infection. Under these circumstances it is only natural that many will contract infection and some will develop actual disease either in childhood, or more often, *later in adult life*. Inquiry is made as to the patient's parents, not *primarily* because they are his parents, but because for many years they have been his closest associates, and it is therefore logical to consider them first as a possible source of infection. Other close or repeated contact with known cases of tuberculosis,

whether or *not* considered to be "active" at the time, should be made a matter of record, not excluding exposure to persons having a chronic cough and/or expectoration, regardless as to what these symptoms may have been attributed to by the party in question or by his physician.

Information being accumulated would indicate that there may be considerable variation between racial and family-group, as well as individual susceptibility to both tuberculous infection and disease. Factors such as these would help explain why, of two or more persons similarly exposed under corresponding conditions, one contracts infection and develops tuberculosis, whereas the other may do neither.

More than half of the persons diagnosed as tuberculous today have never heard of a case of tuberculosis in their family nor can they cite any other definite contact with a tuberculous individual.

A history of diabetes (mellitus) is important because this disease and pulmonary tuberculosis not infrequently are observed to occur concurrently. The presence of one *always* suggests examination for the other.

Recent (or less recent) administration of *cortisone for any purpose* is always worthy of note because of its well known untoward effect upon tuberculous lesions, latent or otherwise.

The presence of *silicosis* has long been recognized to predispose to the development of clinical tuberculosis in persons who are subsequently infected; when superimposed, it tends to light up a previously dormant infection.

\* \* \* \*

*Physical Examination.* Innate ability to resist tuberculous infection or disease *varies greatly* between individuals and does not *necessarily* correspond to *outward appearance*; the apparently robust may be lacking in resistance, the worn-out and "shriveled" may be almost immune!

Examination should be made with the chest bared. Just as people vary widely in the way tuberculosis

\*Prepared by the Virginia State Health Department.

affects them symptomatically (see January issue, *Virginia Medical Monthly*), striking disparity is often observed in the degree to which tuberculous disease is revealed to the physician on physical (and even x-ray) examination. No one knows why, but occasionally persons with advanced tuberculosis, to say nothing of cases with lesser disease exhibit evidence of but a small fraction *if any* of their involvement upon physical examination; changes in the tissues which have taken place do not happen to have caused corresponding modification in physical signs, or are completely masked by surrounding normal lung tissue.

On the other hand, a telltale friction rub may reveal pleural inflammation before thickening or effusion can be seen on x-ray. Fine moist rales may precede evidence of exudation or consolidation on the x-ray film; rales often accompany x-ray evidence of active disease; rarely may they persist for a time after the x-ray shadows with which they were associated, have disappeared.

It is perhaps unnecessary to recall that these *potentially significant fine, moist rales* often can be elicited *only* in the initial phase of inspiration immediately following a forced cough at the end of expiration. The presence of such rales should never be regarded lightly; usually they indicate a previous, if not current, disease process of some kind.

Physical examination of the chest even when performed by a chest specialist is *perfectly normal* in a vast majority of cases with minimal *active* tuberculosis (to say nothing of the "apparently inactive"), and in many with moderately advanced active disease; therefore complete absence of abnormal physical signs does not exclude the presence of lung pathology. On the other hand, abnormal physical signs almost always denote an associated abnormal physical status, *sometimes* worthy of much additional study. For example, the detection of a unilateral wheeze commonly calls for a bronchoscopic examination (with bronchogram) particularly when the concurrent conventional chest x-ray shows no significant deviation.

In a word, *Standard Diagnostic Study* for the purpose of confirming or excluding the presence of pulmonary tuberculosis is *never complete* without a *careful* physical examination.

The physician who doesn't expect to learn much from a physical examination of the chest, seldom does; he may overlook even fairly obvious abnormal-

ities. Skilled use of the eyes, ears, and fingers represent an art achieved only by long and conscientious practice. The truly competent physician, after painstakingly acquiring the art, forever after guards against disuse atrophy!

\* \* \* \*

*Gastric Lavage.* The steadily increasing usefulness of this extremely practical diagnostic aid has been more and more widely recognized and appreciated during the past decade. Today the test is accepted as one of the basic elements which compose standard diagnostic study for pulmonary tuberculosis. The larger the proportion of tuberculous suspects who are first singled out by mass x-ray screening of persons without cough or expectoration, the more frequently must the physician have recourse to gastric lavage to help clinch diagnosis and/or to determine activity status.

Recovery of tubercle bacilli from the fasting stomach contents almost invariably means that the patient has an active tuberculous lesion, shedding tubercle bacilli, somewhere in the *respiratory* tract. Most commonly the bacilli are derived from secretions (unassociated with either "clearing of the throat" or true expectoration) normally wafted up into the pharynx by cilia lining the bronchial tree or they may be contained in sputum, swallowed during the night. Almost never does a positive gastric culture reflect the presence of an unsuspected tuberculous lesion outside the respiratory tract.

A Levin tube is used for aspiration of fasting stomach contents; the recommended technique for collection is very similar to that employed in ordinary gastric lavage, familiar to most physicians.

The patient should be instructed to take no food or fluid after the evening meal of the day preceding the lavage. The following morning the subject will present himself as early as is practicable, to his doctor's office, or to a clinic, or laboratory.

Since primary interest lies in an effort to *culture* tubercle bacilli from the washings, equipment used should, of course, be sterile, and every effort should be made to avoid introduction of contaminants while collecting the specimen.

The Levin tube should first be chilled, preferably by placing in a dry, small, thin-walled, sterile metal pan. The *pan* (not the tube) can then be packed in ice. Ice made from tap water sometimes contains non-pathogenic acid fast organisms; ideally, therefore, direct contact between ice and tube should be



avoided. Experience has taught that it is well to have a second tube in reserve to save time and embarrassment should the first become inadvertently contaminated during course of collection.

If desired the tube can be lubricated with a sterile water-soluble jelly; it is then passed into the stomach usually via the nasal route. Sterile gauze is sometimes used for handling. When introduction is slow and gentle, and the patient is instructed to swallow as soon as the tube is felt in his throat, there is seldom any nausea or other difficulty. The procedure is so simple, indeed, that with a little practice it can be performed successfully and *repeatedly* on small children.

Only rarely is passage through the nose accompanied by sufficient discomfort to require local anesthesia; however, one or two sprays of an appropriate topical anesthetic will prevent, or promptly relieve, any pain that might be experienced by an overly sensitive patient.

As soon as the tube reaches the stomach aspiration of contents is made with a 20 cc glass (luer) syringe. Usually from one to two ounces is obtained readily.

When very little or no material can be obtained immediately, up to 20 cc of sterile water, in small increments, may be introduced through the tube, to facilitate withdrawal of a satisfactory specimen.

Unless a laboratory, prepared to make cultures, is close at hand for direct delivery, the gastric washing

should be placed carefully in a special sterile 4 ounce glass bottle which contains a small amount of trisodium phosphate as a buffer-preservative. These sterile bottles, with cardboard containers for mailing, can be obtained without cost by physicians from the State Health Department Laboratory in Richmond. Specimens can be mailed to the laboratory of one's choice or returned to the State Health Department Laboratory for culture, the same as with samples of sputum.

Ideally and *wherever* feasible the gastric lavage should be performed at bedside, in the home or hospital, shortly after awakening, to assure maximum recovery by culture of organisms present. In this way loss of varying proportions of fasting stomach contents incident to peristalsis, which so often begins when the patient gets up and dresses to go the doctor's office, can be avoided.

Ideally, and *wherever* feasible the gastric washings should be cultured immediately upon recovery.

However, even though, for practical reasons, these recommendations are virtually never carried out on specimens submitted to the State Laboratory, enough positive cultures are obtained *regularly* by the latter to amply justify far greater use of the test, using the modified method described above. During the calendar year of 1953, 14.3% of gastric washings cultured by the State Laboratory in Richmond were positive for Tubercle Bacilli.

---

### Public Relations Tip for Component PR Chairmen

For some first-hand information on current public relations problems confronting the Medical profession and what to do about them, plan now to attend AMA's Third Public Relations Institute September 1 and 2 at Chicago's Drake Hotel. This workshop-styled meeting, devoted mainly to an exchange of suggested public relations techniques, is of particular interest to state and county executives and PR personnel of these societies as well as PR chairmen.

## PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.

*State Health Commissioner of Virginia***Poliomyelitis Vaccine Field Trials in Virginia—1954**

In December word came from the National Foundation For Infantile Paralysis that vaccine against poliomyelitis as developed by Dr. Jonas E. Salk, of the University of Pittsburgh, would be available early in 1954 for field trials. They asked the State Health Department to submit the names of areas in which poliomyelitis had shown a persistent high incidence during the past few years or in which the disease had been present during October and November, 1953. The populations of these areas were reported together with estimated numbers of pupils in the first, second and third grades of school.

There was a meeting in January at which a representative of the head office of the Foundation was present. He stated that Virginia had been too modest in the list submitted and suggested that other areas be added. Accordingly data for two or three additional sections were forwarded. It then became necessary to send to the National Foundation For Infantile Paralysis the actual enrollments in the first, second and third grades, the name of each school and the number of school rooms involving the grades in question. The Advisory Committee to the National Foundation reviewed these reports and on March 8, 1954 the State Health Department was notified that the Cities of Alexandria, Bristol and Richmond, and the Counties of Arlington, Loudoun, Fairfax, Henrico, Chesterfield, Norfolk, Smyth and Washington had been declared eligible. The Medical Directors of Health of each of these cities and counties were called by telephone and told of the selections.

At the January meeting the chairman of the poliomyelitis committee of The Medical Society of Virginia stated that he was confident that the members of the committee would approve of the State Health Department accepting the invitation to have Virginia take part in the field trials of the vaccine. He later polled his committee and only one member voted against participation.

The State Superintendent of Instruction had been present at the meeting in January and had assured the group of the cooperation of the superintendents of the schools in the areas under consideration. This

cooperation has been evident from the start and has continued throughout the period of planning and into the actual administration of the vaccine. They have furnished all the school figures that have been asked for by the National Foundation for Infantile Paralysis. The superintendent of the parochial schools in the Roman Catholic Diocese of Virginia has likewise been most helpful.

In a few days after the notification was received the Manual of Suggested Procedures For the Conduct of The Vaccine Field Trial in 1954 was shipped and a copy was sent to each director of the selected areas. At the same time each one was notified of a meeting to be held in the State Health Department on March 17, 1954, to discuss and plan for the field trials. Each was asked to bring the superintendent of schools in his county or city, and any other key people who might be interested. The meeting was fully attended and in addition to those named, the commissioner, the directors of participating bureaus, representatives of The Medical Society of Virginia and the state and national offices of the National Foundation for Infantile Paralysis, were present. The physician from the Foundation reviewed the high spots of the Manual and answered questions. There was extreme disappointment, openly expressed by everyone, that the date of release of the vaccine could not be announced. In spite of the lack of a specific date to plan to give the first injections, the directors of health agreed to start immediate organization.

Early in April the forms needed for parental requests, school rosters, vaccination and blood test recording, film strips and pamphlets for educational purposes were distributed. Tentative dates were set for the first vaccination and, later, on hearing that the release date could not be announced until after April 21, these dates were extended. The many groups who would participate were briefed over and over again and finally, in one area, special delivery letters with instructions listed a, b, and c, were mailed in time to be delivered the day before V-Day.

An important consideration was the long-planned annual Virginia Public Health Conference held in Roanoke on April 21, 22, and 23, at which the directors of health, nurses and sanitarians were in

attendance. It was during this meeting that the commissioner was notified that the first part of the shipment of vaccine had been received in the central office of the Health Department on April 21, and the rest had come in the following day. The vaccine had to be held under refrigeration until the notice of action by the Advisory Committee to the National Foundation permitted its release to the counties and cities designated. This permission was received late the afternoon of Sunday, April 25, and immediately shipments to Fairfax and Loudoun Counties went in one automobile and to Norfolk County in another. The next day the State Police relayed the allotment for Smyth and Washington Counties and the City of Bristol. Henrico and Chesterfield Counties and the City of Richmond picked up their own. The City of Alexandria, following action by their local Medical Society, on April 8, declined participation, and the County of Arlington which first had accepted, withdrew on April 16.

The first use of the commercially produced vaccine, other than tests by Dr. Salk, was in Fairfax County, Virginia, on Monday, April 26, 1954. Vaccinations in the other areas followed daily during this week

and the vaccine has been given with clock-like precision as a result of the well prepared program and the splendid cooperation of all concerned. Without the help of the public school system and the private schools, members of the medical profession and lay volunteers, the National Foundation for Infantile Paralysis and the health departments would not have been able to carry through the project.

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	April 1954	April 1953	Jan.- April 1954	Jan.- April 1953
Brucellosis .....	2	1	9	16
Diphtheria .....	3	1	22	45
Hepatitis .....	420	185	2101	754
Measles .....	5534	903	12760	2385
Meningococcal Infec. ....	6	16	44	102
Poliomyelitis .....	4	3	16	10
Rocky Mt. spotted fever	1	2	1	2
Streptococcal Infections -	654	489	2106	2633
(Including scarlet fever)				
Tularemia .....	1	0	17	14
Typhoid Fever .....	3	3	14	12
Rabies in Animals .....	46	42	174	194

## PUBLIC RELATIONS

### Virginia's PR Frontier

The world in which we live little resembles the world of twenty-five years ago. The changes have been rapid—brought about by improved communications and transportation. The most powerful forces behind these changes have undoubtedly been two of the most fabulous inventions ever devised by man.

First it was the radio, bursting upon the scene with an impact felt in every corner of this nation—an invention which almost overnight changed the thinking and living habits of millions.

Then it was television, coming on to completely revolutionize the fields of education and entertainment. The public imagination was captured as never before by this newest scientific phenomenon. Living rooms were planned and built around the TV set, and a fantastic crop of TV antennae blossomed from the nation's roof tops.

The result is a new American frontier—a public relations frontier with potentialities which stagger the imagination. Today nearly every home has a

radio or TV set, and most have both. It is even more remarkable when it is considered that radio is heard by just about everyone, including the vast number who do little reading. The doors of public information have been opened in every home, and the welcome mat is out.

The Public Relations Committee of The Medical Society of Virginia, together with the PR committees of component societies, has undertaken to pioneer this new frontier, and progress thus far is most encouraging. Medical radio programs designed to appeal to all types and age groups are currently being presented by radio stations in Crewe, Danville, Farmville, Fredericksburg, Hopewell, Lynchburg, Narrows, Norfolk, Petersburg, Richmond and Suffolk. It will not be long before the entire state is covered.

Medical television programs have been presented in Lynchburg, Norfolk and Richmond, and others are scheduled. The response has been even better than expected, and it is becoming more and more apparent that Virginia's new frontier is indeed a challenge to our PR pioneers.



## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

---

<i>President</i> .....	MRS. K. W. HOWARD, Portsmouth
<i>President-Elect</i> .....	MRS. MAYNARD EMLAW, Richmond
<i>Recording Secretary</i> .....	MRS. LEE S. LIGGAN, Irvington
<i>Corresponding Secretary</i> —	
	MRS. LEMUEL E. MAYO, Portsmouth
<i>Treasurer</i> .....	MRS. WILLIAM C. BARR, Richmond
<i>Publication Chairman</i> ..	MRS. WM. S. GRIZZARD, Petersburg

---

### Northampton-Accomac.

The regular meeting of this Auxiliary was held on April 13th at "Wellington", the home of Dr. and Mrs. Edmund Henderson at Nassawadox. Following a delightful luncheon, the business session was opened by the president, Mrs. E. E. Mihalyka. Mrs. W. J. Sturgis, Sr., read a poem "The Power of Thought" and the auxiliary pledge was repeated in unison.

At the close of the meeting, the members were invited to make a tour of the new Health Center in Nassawadox and were shown a film about the work of the Health Department in Virginia. Nineteen members were present.

MRS. SHEPPARD K. AMES, *Secretary*

### Petersburg.

Mr. Sydney Swann was the guest speaker at the April meeting of the Petersburg Medical Auxiliary. He is president of the Southside Area chapter of the Virginia Association for Mental Health. He enlisted the aid and cooperation of the auxiliary in awakening the public to the need of a mental health clinic in Petersburg.

Plans for the annual luncheon meeting was discussed and Mrs. Meade Edmunds and Mrs. Herbert Jones were named co-chairmen for the event.

Mrs. Palmore Irving gave a report on the success of the Spring rummage sale which was held in April.

A fund-raising dinner is to be held May 22nd at the summer home of Dr. and Mrs. Herman Farber, with Mrs. Farber, Mrs. Kirby T. Hart, Jr., and Mrs. Glenn Phipps in charge.

Mrs. John Hamner, who is the head of the nurses' recruitment program, urged that this program be continued even though the nursing school in Petersburg is closing. She stressed the great need for nurses whether they train here or elsewhere.

MARGARET S. WHITTLE

### Alexandria.

On March 23rd, the Alexandria Auxiliary sponsored the play by Tennessee Williams, "Summer and Smoke" and sold out the 122 seats at the Arena stage in Washington. Auxiliary members entertained in their homes the groups to whom they had sold tickets. Approximately three hundred dollars was realized from this project which went into a fund for the purchase of a doctors' call board at the Alexandria Hospital.

Sunday, April 25th, was the annual clinic day given by the Medical Society for the doctors in the northern Virginia area. Auxiliary members were most active in procuring advertising for the program, in having the programs printed and in notifying the doctors in the area. They also planned a luncheon for the men, entertainment for the wives of those attending, and a cocktail party which brought to a close the activities of the day.

The annual luncheon meeting of the combined Alexandria-Arlington Auxiliaries was held on April 27th at Hunting Towers in Alexandria. Twenty-nine members from Arlington were present and thirty-two from Alexandria.

MRS. JAMES H. MASTERSON

### Southwestern Virginia.

This Auxiliary met at the Martha Washington Inn, Abingdon, on April 15th. Mrs. C. C. Hatfield of Saltville, president, presided. A welcome to the group was given by Mrs. Harry Hayter of Abingdon.

Mrs. F. C. Bedsaul, Floyd, introduced the speaker, Mrs. Kalford W. Howard of Portsmouth, president of the State Auxiliary, who spoke on auxiliary activities. Mrs. Joseph Blalock of Marion, State Chairman of Mental Health, discussed mental health with emphasis on interesting films which may be obtained for use by community groups.

Following the meeting, the members enjoyed a

tour of interesting houses and antique shops in Abingdon, returning to the Inn for cocktails and the banquet.

#### **Arlington.**

The Arlington and Alexandria Auxiliaries met for luncheon on April 27th at the Magnolia room of Hunting Towers, Alexandria. Mrs. Kalford W. Howard, president of the State Auxiliary, was guest. Mrs. Maynard Emlaw, president-elect, who was to be a guest also, was ill and could not attend. Mrs. Howard gave a very informative talk on the activities throughout the state and the various projects of the auxiliaries. Mrs. Alfred Abramson, Alexandria, entertained the group with a medley of songs. She was accompanied by Mrs. Sverre Gulbrandsen.

It was a pleasure to have such a large number of both groups present for this annual get-together.

EARLE MITCHELL (Mrs. R. H.)

#### **Norfolk.**

The annual public relations meeting of the Auxiliary was held at the Norfolk Yacht and Country Club on April 21st. The presidents of the various womens organizations in the county, representatives of the newspapers, radio and television stations were invited to a luncheon to hear Dr. Walter B. Martin, president-elect of the American Medical Association, explain the Eisenhower health program. Mrs. Lemuel Mayo, public relations chairman, was in charge.

#### **Richmond**

The Auxiliary to the Richmond Academy of Med-

icine celebrated Doctor's Day on March 30th by sending flowers and cards to the sixteen doctors in Richmond who are members of the Fifty Year Club of The Medical Society of Virginia. On March 16th the Richmond News Leader carried a picture of Dr. Emily Runyon and a story concerning members of the Fifty Year Club, and on March 30th pictures and feature stories on Dr. Ramon Garcin, Dr. Thomas Murrell and Dr. William Parker. The Auxiliary presented a check for fifty dollars to the American Medical Education Foundation in honor of the members of the Richmond Academy of Medicine.

The Auxiliary organized its first Future Nurses Club at the Thomas Jefferson High School in April, under the direction of Mrs. Walter Buffey. Sixty students enrolled at the first meeting at which time a film "When I Choose Nursing" loaned by the Richmond League of Nursing was shown. A window in Thalhimer's Department store was decorated as a project of the Future Nurses Club, showing the caps worn by nurses in the seven schools of nursing in Richmond. This exhibit was displayed during the week of May 9th.

Assisting Mrs. Walter Buffey are Mrs. George Ritchie, Mrs. Adney K. Sutphin, members of the Auxiliary, and Miss Mary T. Oewel, the school sponsor. Mrs. Richard Kirkland will do research in behalf of the future nurses. She is compiling a list of nursing scholarships offered locally and hopes to publish the pamphlet by the end of the first Future Nurses Club year.

---

Has your society begun a new PR project during 1954? If so, the Public Relations Committee of The Medical Society of Virginia would like to hear about it. Your society—no matter what its size—may have hit upon an idea that will further PR efforts over the state.

## BOOK ANNOUNCEMENTS

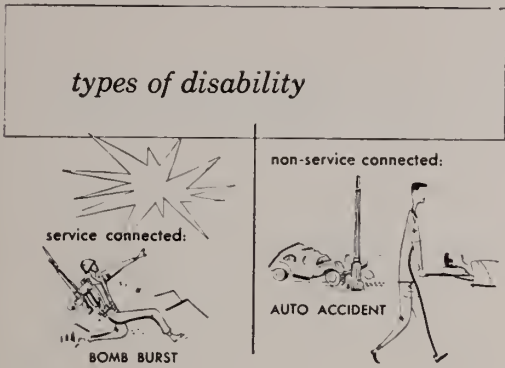
- Understanding the Japanese Mind.** By JAMES CLARK MOLONEY, M. D. Philosophical Library, New York. 1954. xviii-252 pages. Cloth. Price \$3.50.
- Salt and the Heart.** By EDWARD T. YORKE, M.D., Linden, N. J., Attending Cardiologist, Alexian Brothers Hospital; Associate Cardiologist, St. Elizabeth Hospital; etc. Drapkin Books, Linden, N. J. 1954. xi-83 pages. Cloth. Price \$3.45.
- Science and Man's Behavior.** The Contribution of Phylobiology. By TRIGANT BURROW, M.D., Ph. D. Edited by WILLIAM E. GALT, Ph. D. Including the complete text of *The Neurosis of Man*. Philosophical Library, New York. 1954. xii-564 pages. Cloth. Price \$6.00.
- You and Your Health.** By EDWIN J. JORDAN, M.D., Charlottesville, Virginia, Executive Director, American Association of Medical Clinics. G. P. Putnam's Sons, New York. 1954. xiv-296 pages. Cloth. Price \$3.95.
- Children for the Childless.** A Concise Explanation of the Medical, Scientific, and Legal Facts about Conception, Fertility, Sterility, Heredity, and Adoption. Edited by MORRIS FISHBEIN, M.D. With Chapters by Sidonie Gruenberg, Morris Fishbein, M.D., Edward Weiss, M.D., I. C. Rubin, M.D., Nicholson J. Eastman, M.D., J. P. Greenhill, M.D., Fred B. Kyger, M.D., and Richard L. Jenkins, M.D., and Benjamin C. Gruenberg, Ph.D. Doubleday & Company, Inc., Garden City, New York. 1954. 223 pages. Cloth. Price \$2.95.
- Only the Happy Memories.** Reminiscences of a Virginia Boyhood. By BRANTLEY HENDERSON, M.D., Halifax County, Virginia, and Sanford, Florida. Exposition Press, New York. 1954. 197 pages. Cloth. Price \$3.00.
- Illustrated Review of Fracture Treatment.** By FREDERICK LEE LIEBOLT, A.B., M.D., Sc.D., LL.D., Attending Surgeon in Charge of Orthopedics, the New York Hospital; Attending Orthopedic Surgeon, Hospital for Special Surgery; etc. Lange Medical Publishers, Los Altos, California. 1954. 229 pages. Price \$4.00.
- The Meaning of Social Medicine.** By IAGO GALDSTON, M.D., Secretary, Medical Information Bureau, The New York Academy of Medicine. The Commonwealth Fund. Harvard University Press, Cambridge, Massachusetts. 1954. viii-137 pages. Cloth. Price \$2.75.
- Seventy-Five Years of Medical Progress. 1878-1953.** Edited and with a Foreword by LOUIS H. BAUER, M.D., F.A.C.P., Secretary-General, The World Medical Association; Past-President, The American Medical Association. Lea & Febiger, Philadelphia. 1954. 286 pages. Cloth. Price \$4.00.
- Menorrhagia—Menstrual Distress.** By WILLIAM BICKERS, M.D., Attending Gynecologist to Retreat for Sick, Sheltering Arms, Richmond Community and Evangeline Booth Hospitals, Richmond, Virginia. Charles C. Thomas, Springfield, Illinois. 1954. 97 pages. Cloth. Price \$2.75.
- Compulsory Medical Care and The Welfare State.** By MELCHIOR PALYI. An Analysis Based on a Special Study of Governmentalized Medical Care System on the Continent of Europe and in England. Distributed by The Committee for Constitutional Government, Incorporated, New York. National Institute of Professional Services, Chicago. 1954. Cloth. Price 1 to 5 copies \$2.00 each.
- Thoughts About Life.** By FELIX FRIEDBERG. Philosophical Library, New York. 40 pages. Cloth. Price \$2.50.
- A Doctor Talks To Women.** What They Should Know About the Normal Functions and Common Disorders of the Female Organs. By SAMUEL RAYNOR MEAKER, M.D. Simon and Schuster, New York. 1954. xiii-231 pages. Cloth. Price \$3.95.
- The Jealous Child.** By EDWARD PODOLSKY, M.D., Department of Psychiatry, Kings County Hospital, Brooklyn, New York. Philosophical Library, New York. 1954. ix-147 pages. Cloth. Price \$3.75.
- This is a popular, down to earth, representation of generally accepted concepts in psychology and psychiatry, on the emotional development of children. Twenty-two of the twenty-five chapters explain the psychological reactions of children to their specific problems of isolation, such as, physical defects, chronic diseases, left handedness, sensory defects and speech disorders, individual rejection within the family group, parental uncongeniality of various degrees, illegitimacy, adoption, the filiation to a minority group and others.
- In the chapter the Jealous Child, the author brings the reactions of these various groups on a common denominator, jealousy being defined as a manifestation of many inner needs that are not and cannot be fulfilled.
- The book would have benefited by a more searching approach which would have permitted an insight into the way such children's problems develop individually, rather than to state them more or less dogmatically.

H.R.

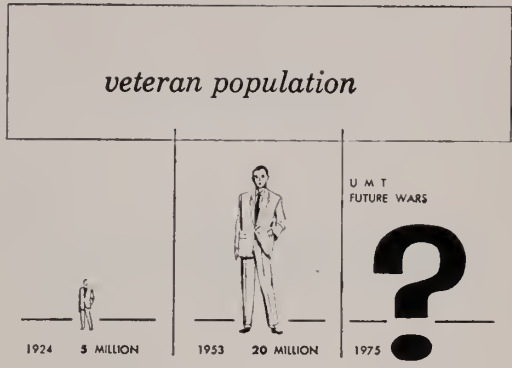


In Viewing the VA Medical Program . . .

In Viewing the VA Medical Program . . .



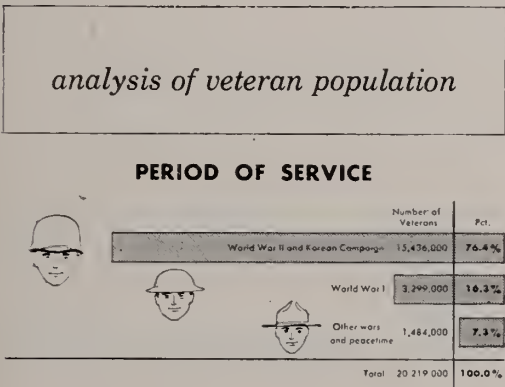
The medical profession fully endorses and supports the medical program of the Veterans Administration through which veterans receive medical care and hospitalization without cost for illnesses or injuries incurred as a result of military service (left). It is felt, however, that the federal government should not assume the responsibility for the medical care of veterans whose disabilities are incurred in civilian life and which have no relationship to their military service.



The U. S. veteran population now includes about 40% of all adult males. Under existing legislation, the federal government is obliged to provide "free" medical care for many of these veterans, if they request it. The medical profession questions the soundness of providing medical care<sup>3</sup> at federal expense to veterans with non-service-connected disabilities. It is likely that by 1975 the U. S. will truly be a "nation of veterans." If the VA medical program continues to accept responsibility for the care of veterans with service-connected and non-service-connected disabilities alike it is difficult to see how a complete federal health program can be avoided.

In Viewing the VA Medical Program . . .

In Viewing the VA Medical Program . . .



Taxpayers should note that as veterans grow older they require more frequent and increasingly longer periods of hospitalization. World War I patients are now hospitalized twice as long, on the average, as World War II patients with similar disabilities. World War II veterans, relatively young and comprising 76% of the total veteran population, present a costly long term responsibility to U. S. taxpayers. The medical profession recommends medical care through the VA for only those veterans with service-incurred disabilities and temporarily for those with tuberculosis or neuropsychiatric conditions of non-service-connected origin.

*analysis of present veteran population*

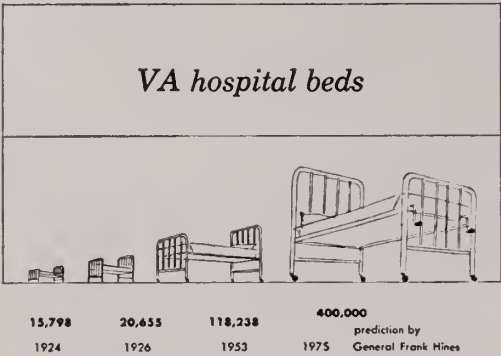
AGE DISTRIBUTION (Exclusive of those discharged on or after June 27, 1950)

DATE	JAN. 1, 1952	JAN. 1, 1960	JAN. 1, 1970
TOTAL	18,850,000	18,160,000	16,146,000
AGE 22-44	77.2%	62.7%	13.5%
45-64	21.8%	27.4%	73.7%
OVER 65	1.0%	9.9%	12.8%

Older veterans are hospitalized more frequently for civilian-incurred ailments than for service-connected disabilities. By 1970, over 86% of the present veterans will be age 45 or over, more than three times the number in this older age group today. Because of advanced age, they will require more frequent and prolonged hospitalization for illnesses having no relationship to their military service. Responsibility for such medical care should be assumed by the individual or local government, not by the federal government.

In Viewing the VA Medical Program . . .

In Viewing the VA Medical Program . . .



Farmer VA Administrator Frank Hines estimated that by 1975 under existing VA medical legislation, approximately 400,000 hospital beds will be needed. Yet medical authorities are convinced the VA cannot attract sufficient medical personnel to staff more than 120,000 beds. The VA now maintains three times the number of beds needed for treatment of service-connected cases.

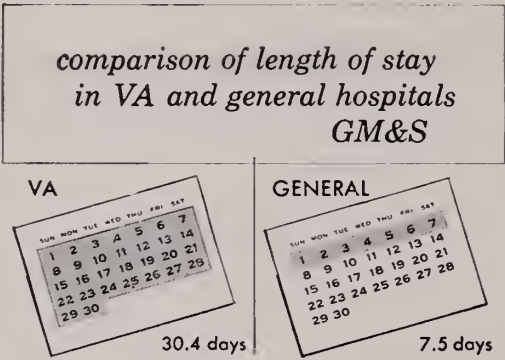
average length of stay in VA hospital

	Average (days)	World War II (days)	World War I & Other (days)
TB	205.8	203.6	210.2
NP	178.3	89.2	430.6
GMS	30.8	23.5	42.5

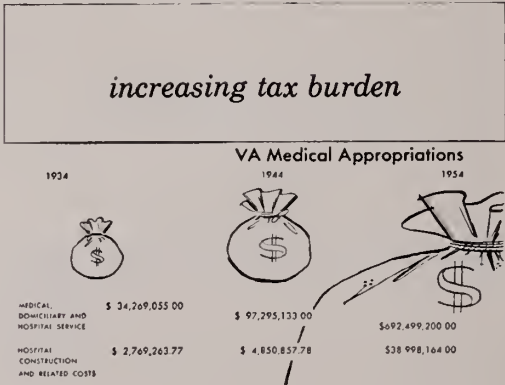
The average length of stay in VA hospitals for World War I veterans is considerably greater than for World War II veterans, which now comprise 76% of the total veteran population. The greatest pressure is yet to be exerted on VA hospitals as World War II veterans grow older and require increased medical care for disabilities unrelated to military service.

'In Viewing the VA Medical Program . . .

In Viewing the VA Medical Program . . .



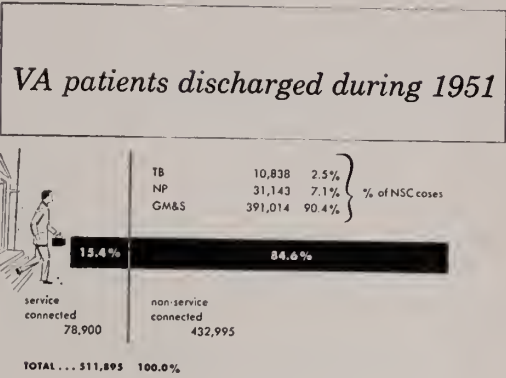
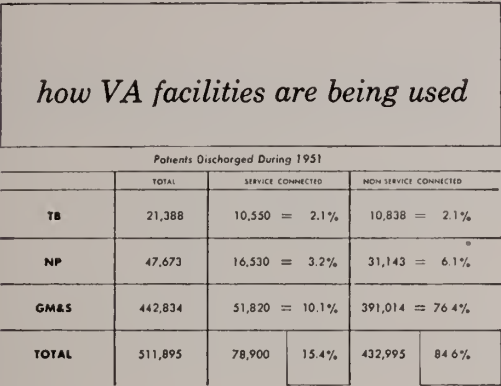
General medical and surgical patients in VA hospitals are confined four times longer than in non-federal hospitals. VA hospitals admit patients for examination, diagnosis, and treatment, much of which is normally undertaken outside civilian hospitals. Also, VA patients often remain hospitalized throughout the entire medical treatment period, whereas non-VA patients are usually treated at home during their convalescence. This is a major factor in the tremendous cost of the VA medical program.



In twenty years, the cost of the VA medical program to U. S. taxpayers has increased 1,875%. Yet only 15% of the patients treated in VA hospitals are veterans with disabilities incurred while in uniform. The VA medical program is now second in size and expense only to the nation-wide system of socialized medicine in Great Britain.

In Viewing the VA Medical Program . . .

In Viewing the VA Medical Program . . .

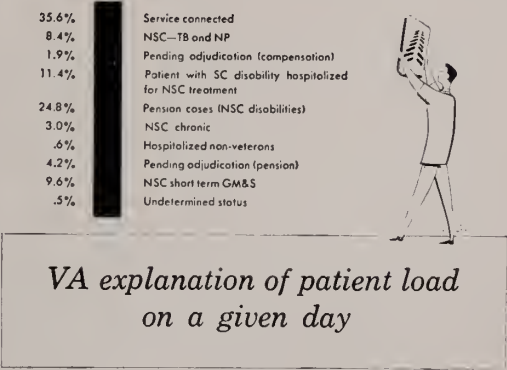
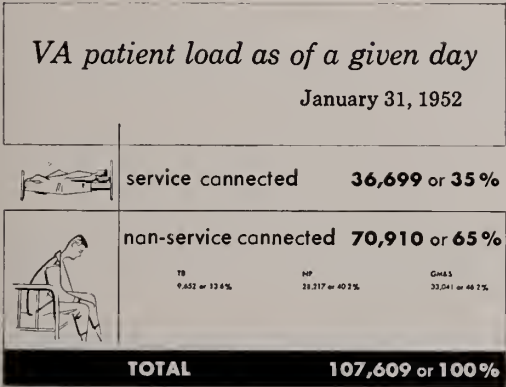


The medical profession recommends that VA medical care be maintained for treatment of all service-connected cases and temporarily for all wartime veterans suffering from tuberculosis or neuropsychiatric disorders of non-service-connected origin, within limits of existing VA facilities, if they cannot afford private medical care. General medical and surgical patients with non-service-connected disabilities (now 76.4% of all VA patients) should not be entitled to "free" federal medical care.

Of 511,895 patients discharged from VA hospitals in 1951, only 15.4% were treated for illnesses or injuries incurred as a result of military service. Physicians believe it is unsound to continue authorization of "free" lifetime medical care for those who suffer no mishap while in uniform, while other citizens with no military background must pay their own way.

In Viewing the VA Medical Program . . .

In Viewing the VA Medical Program . . .



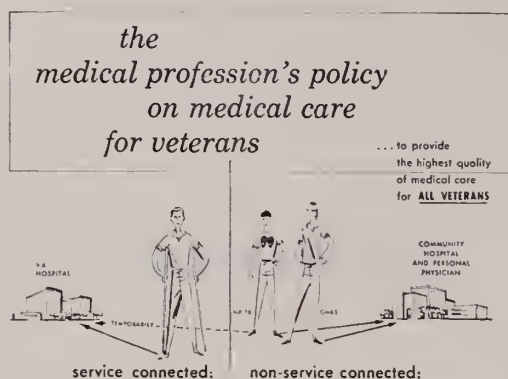
While the VA lists its patient load on a given day as 35% service-connected, only the long-range view of admissions and discharges over a year's time gives a truly accurate picture of the service-connected load (only 15.4%). This "discrepancy" appears because the VA's listing of 35% on a daily basis is not affected by the yearly turn-over of patients—the ratio of VA patients remaining to those treated and discharged (1 to 5.1). Over a period of a year, 84.6% of VA patients are treated for disabilities incurred after—and having no relationship to—military service.

The above classification is presented by the VA as an explanation of the large non-service-connected patient load in its hospitals. The medical profession recommends that only the first category and those in the third whose disabilities are determined to be service-connected should be entitled to federal medical care. Non-service-connected TB and NP cases should continue to be treated on a temporary basis until community and state facilities can be readied. The remaining groups obviously have no service-connection and are hospitalized for illnesses or injuries incurred in civilian life.

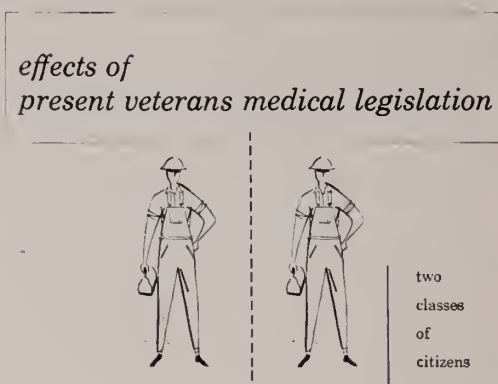


## In Viewing the VA Medical Program . . .

## In Viewing the VA Medical Program . . .



The medical profession stands for the highest quality medical care for all citizens. Veterans, as citizens, should accept the responsibility for their own health needs—unless they became disabled as a result of military service; then it is the responsibility of the Veterans Administration to provide medical care and hospitalization. Because many communities do not as yet have adequate facilities to care for war veterans with non-service-connected tuberculosis or neuropsychiatric disorders, the medical profession recommends that the VA continue—on a temporary basis—to treat these patients.



It is the belief of the medical profession that it is unsound to authorize free lifetime medical care for veterans who suffered no mishap in uniform, while other citizens with no military background must pay their own way. Although the two men above are identical, they represent "two classes of citizens"—the veteran with no service-connected disability who is granted medical care at federal expense, and the non-veteran who must personally assume responsibility for his medical care.

## In Viewing the VA Medical Program . . .

*we are not talking about...*

- 1 VA Form 10-P-10
- 2 Ability of veterans to pay
- 3 Efficiency of VA Administration
- 4 Extent of abuse



The medical profession is not concerned with alleged maladministration of present legislation by the Veterans Administration or with abuses by veteran-applicants of the hospital and medical care privileges. The nation's physicians do not feel that they have the responsibility to police the veterans medical care program, although they have cooperated wholeheartedly in assuring that veterans hospitalized under the present VA laws receive the highest quality of medical care.

## IN VIEWING THE VA MEDICAL PROGRAM . . .

*what we are talking about...*

1. Lack of moral or legal justification in providing federal medical care for ALL veterans
2. Effect of the VA program on civilian medical training programs
3. Current and eventual effects of VA program on civilian health standards

4. Competition for health personnel and patients

5. Unsound economics of overlapping federal medical services

6. Expanding tax-burden

7. Veterans' attitude toward VA medical program



These seven points are the conclusions of a careful analysis by the medical profession of the current VA medical program. (1) Veterans with no service-incurred disability should assume responsibility for their own medical care on the same basis as other citizens. (2) Medical schools and hospitals are hard pressed to train enough medical personnel for the benefit of all as long as the federal government siphons off such personnel from civilian programs. This VA practice has caused a duplication of hospital facilities and an unwarranted dispersion of health personnel. (3) The VA is creating an "artificial" shortage of medical personnel at the expense of civilian health programs. (4) Government has placed itself in competition with civilian medical programs,

both for personnel and patients, making it increasingly difficult to operate civilian hospitals efficiently and economically. (5) Although the federal government is spending millions of dollars under the Hill-Burton act in civilian hospital construction, these hospitals are hard pressed to operate at reasonable cost while in direct competition with hospitals **wholly** supported by the federal government. (6) The medical profession asks whether a program providing "free" medical care to veterans with no service-incurred disabilities is a justified burden to impose on the taxpayers of this country. (7) Physicians do not believe that a veteran who served his country wishes to be the recipient of a federal "handout" at the expense of his fellow citizen-taxpayers.

## PR TIP OF THE MONTH

Building good television relations is as important to a medical society as establishing good press relations. TV contacts pave the way not only for securing public service time for regular shows—but also for arranging "spot" interviews with outstanding medical men who may visit the community from time to time. In Binghampton, New York, a number of such "spots" have been arranged during local telecasts by the society.

## EDITORIAL

## "Totimycin"

**F**EVER is a common symptom of many infectious diseases. Defervescence usually implies recovery from such a disease process. The remarkable action of antibiotic agents on susceptible infections is reflected specifically by a return of body temperature toward normal. This correlation of therapy with symptomatic response has led to an insidious change in the approach of the physician to the febrile patient. It has become tempting to treat the fever with an antibiotic rather than engaging in the tedious business of first making a diagnosis. Recently, a confusing variety of chemotherapeutic combinations has been introduced which are said to have a "broader antimicrobial spectrum of activity". This tends to reassure the physician that such a preparation is more likely to cure a fever regardless of the cause. Indeed the era of the universal antipyretic seems near at hand. Perhaps we may witness the development of a single injection containing a broad-spectrum antibiotic, streptomycin, chloroquin, cortisone, and a nitrogen mustard! Such a marvel could then be utilized to abolish any fever, whether due to malaria, amebiasis, actinomycosis, tuberculosis, gram-positive and gram-negative bacteria, rickettsiae, large viruses, the lymphomas, or collagen disorders.

Evidently, it is important to consider the circumstances in which anti-bacterial mixtures are helpful and in which they are useless or may be harmful. The indications for specific mixtures are as follows:

(1) To provide suppressive action on two or more components of a particular infection. The familiar use of penicillin and streptomycin in peritonitis following fecal contamination is a good example. Here gram-positive cocci are suppressed by penicillin and gram-negative rods by streptomycin.

(2) To cover various possibilities in a severe infection of unknown etiology when delay might prove costly. Meningitis and brain abscess following mastoiditis may be due to one of various organisms. Between the time a culture is taken and the laboratory makes a report, the patient may receive two or three antibiotics simultaneously. When the organism is identified, only the appropriate antibiotic need be retained.

(3) To reduce toxicity. Triple sulfonamides and a combination of streptomycin and dihydrostreptomycin represent this type of advantage.

(4) To delay emergence of resistant organisms. Note the combined use of streptomycin and isoniazid in tuberculosis.

(5) To produce a synergistic action on certain bacteria. Endocarditis due to the enterococcus rarely responds to either penicillin or streptomycin alone but is usually cured by the combination of the two.

In contrast to these clear-cut indications, certain disadvantages to the use of antibiotic mixtures must be emphasized:

(1) Inappropriate dose relationships. A popular combination of penicillin and streptomycin mixed in a vial contains 300,000 units of procaine penicillin and 0.5 or 1.0 gm. of streptomycin. In cases of over-whelming peritonitis it is advisable to administer a much larger ratio of penicillin to streptomycin.

(2) Multiple antigenicity. Every antibiotic is a potential allergen. The wider the variety of drugs employed the greater the likelihood of skin rash, urticaria, anaphylaxis, etc.

(3) Expense. Mixtures of drugs are inevitably more costly to the patient. Many



antibiotic preparations are now combined with sulfonamides. This practice is almost never justified.

(4) Needless induction of resistant bacteria. It should always be remembered that the introduction of an antibiotic into a patient's blood stream does not merely treat a local infection but perfuses the whole body and affects the bacteria of the skin, nose, sinuses, mouth, and intestinal tract. Every unnecessary dose of an antibiotic hastens the day when more and more of these potentially pathogenic organisms become resistant to all of our presently useful drugs.

In summary, it is clear that antibiotic mixtures can become valuable therapeutic adjuncts but will never act as a panacea of infections. Their use calls not for facility with a prescription pad but for all the diagnostic skill and therapeutic critique of the well trained physician.

COUNT D. GIBSON, JR., M.D.

---

## SOCIETIES

---

### **Richmond Academy of Medicine**

At the March 23 meeting of the Academy, the papers presented were—

Coordinating Surgery for Pulmonary Tuberculosis with Modern Chemotherapy by Dr. Alfred M. Decker, and

Hirsutism and Virilism by Dr. Herbert G. Langford.

Dr. Benjamin W. Rawles, Jr., is president of the Academy.

### **The Fairfax County Medical Society**

Met on Thursday, April 8th, at the home of Dr. Nelson Podolnick in Falls Church, Virginia.

The speaker was Dr. Robert Lee, an Orthopedic Surgeon, who spoke on Orthopedics in General Practice.

### **Warwick-Newport News Society.**

There was a joint meeting of this Society and The Peninsula Dental Society on May 11th at the Hotel Chamberlin, Old Point Comfort. A panel discussion was held by three members of the faculty of the School of Dentistry, Medical College of Virginia, on "Oral Manifestations of Systemic Diseases."

Dr. William A. Read is president of this Society and Dr. F. Ashton Carmines, secretary-treasurer.

### **The Tazewell County Medical Society**

Held its regular bi-monthly meeting on April 21st at the River Jack Restaurant in North Tazewell, with the president, Dr. W. R. Strader, presiding.

Dr. R. C. Neal, a member of the staff of the Bluefield Sanitarium, Bluefield, W. Va., spoke on "Fluid and Electrolyte Balance".

Dr. Mary Elizabeth Johnston is secretary of this society.

### **The Medical Society of Northern Virginia**

Held its Spring meeting in Winchester on May the 13th, with Dr. E. L. Grubbs of Front Royal presiding. Case reports were presented by

Dr. A. L. Wilson—"Carcinoma of the Ovary of a 22 Year Old Girl";

Dr. George Smith—"Carcinoma of the Larynx"; and

Dr. Douglas Hill—"Pseudo-Anginal Syndrome".

The guest of the meeting was Dr. Harry G. Hull, Professor of Clinical Surgery, University of Maryland, School of Medicine, Baltimore, who spoke on "Tumors of the Neck".

The next meeting will be in Front Royal on August the 10th.

### **Alexandria Medical Society.**

At the regular meeting on April 8th, the following officers were elected: President, Dr. Christopher J. Murphy, Jr.; vice-president, Dr. F. Preston Titus; and secretary, Dr. Thomas F. McGough. The Executive Board consists of the president, vice president, and secretary (ex officio), Dr. John Watson, Dr. Daniel Yuter and Dr. Haskins Ferrell, Jr.

### **Wise County Medical Society.**

Following a dinner at the Norton Hotel, Norton,

on April 14th, the meeting was called to order by the president, Dr. T. J. Tudor. The Society recommended that Dr. N. F. Hix, Wise, be asked to accept reappointment as County Medical Examiner and Dr. Francis S. Jones, Norton, was recommended for County Pathologist. A new advisory committee to the Community Blood Bank was appointed with Drs. Francis S. Jones, J. T. Phillips and C. E. P. Burgwyn as the members.

The advisory committee to the Woman's Auxiliary announced that it is recommending that the Auxiliary take an active part in organization and direction of a County Cancer Society.

Dr. Robert Jessee, County Health officer, discussed plans for the establishment of a Maternal-Child Health Clinic in Norton and the plan was approved unanimously.

Dr. Eugene Bene, Norton, gave an informal and informative talk on "Chest Pain".

LEO N. KIRCH, *Secretary*

### Virginia Peninsula Academy of Medicine.

At the regular monthly meeting on April 1st at the Coca-Cola Building in Newport News, Dr. Robert Creadick, Associate Professor of Obstetrics and Gynecology at Duke University, was guest speaker.

## NEWS

### Calendar of Coming Events

VIRGINIA HEART ASSOCIATION—Hotel Jefferson, Richmond—June 13

AMERICAN MEDICAL ASSOCIATION—Annual Meeting—San Francisco, June 21-25

AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION—Washington, D. C., September 6-11

AMERICAN ASSOCIATION OF BLOOD BANKS—7th Annual Meeting—Shoreham Hotel, Washington, D. C., September 13-15

THE MEDICAL SOCIETY OF VIRGINIA—(Annual Meeting)—First Interstate Scientific Assembly—Shoreham Hotel, Washington, D. C., October 31-November 3

### Inaugural Ceremony to Be Broadcast.

Virginia physicians who are not able to attend the A.M.A. meeting in San Francisco will be able to hear the inaugural ceremony at which Dr. Walter B. Martin, Norfolk, will become the Association's 108th President. The installation will be broadcast nationwide by radio on Tuesday night, June 22nd, and all physicians are urged to watch the radio listings in local papers for broadcast of the ABC program.

### Have You Made Your Reservations?

From all indications, The Medical Society of Virginia can expect a record breaking registration for the First Interstate Scientific Assembly (Annual Meeting). We have been advised that the Shoreham (headquarters) is now sold out, and reservations are being referred to the Sheraton Park (formerly Wardman Park). The Sheraton is a beautiful hotel—one of Washington's finest—and is directly

across the street from the Shoreham. The Society is fortunate to have secured 200 rooms at the Sheraton.

If you haven't yet made your reservations—do so now! This meeting, to be held from October 31-November 3, promises to be an historical event for both The Medical Society of Virginia and the Medical Society of the District of Columbia.

### Dr. R. Finley Gayle, Jr.,

Richmond, has been named president-elect of the American Psychiatric Association. He will take office in 1955, succeeding Dr. Kenneth Appel of Philadelphia.

### Reich Devices and Abrams-Type Machines Dangerous Frauds.

"Orgone energy" devices misbranded with curative claims were barred from interstate commerce by a permanent order issue in the Federal district court

at Portland, Maine. Those enjoined from distributing the devices are Dr. Wilhelm Reich and his wife, Ilse Ollendorff Reich, and the Wilhelm Reich Foundation, all of Rangeley, Maine. Models produced by Dr. Reich are the "Orgone Energy Accumulator", "Shooter Box", "Orgone Energy Blanket" and "Orgone Energy Funnel".

Thirteen electrical devices which have been widely distributed for the diagnosis and treatment of serious diseases were barred from shipment in interstate commerce by an injunction decree in the Federal district court at San Francisco. The names of the machines are as follows: Oscilloclast, Oscillotron, Regular Push Button Shortwave Oscilloclast, Sweep Oscillotron, Sinusoidal Four-in-One Shortwave Oscillotron, Galvanic Five-in-One Shortwave Oscillotron, Depolaray, Depolatron, Depolaray Chair, Depolatron Chair, Depolaray Junior, Electropad, and New Depolaray Junior. These machines are products of the Electronic Medical Foundation of San Francisco, formerly the College of Electronic Medicine. It was set up by the late Dr. Albert Abrams, inventor of the machines, to perpetuate his electro-medical theories.

The Department of Health, Education and Welfare of the Food and Drug Administration advises that several thousand of the Reich devices and the Abrams-type machines are now in the hands of practitioners who will continue to use them. The machines have been declared as dangerous frauds.

#### **Dr. Hamner Twice Honored.**

Dr. James L. Hamner, Mannboro, has been elected president of the State Board of Health, to fill the vacancy caused by the death of Dr. William Tate Graham. Dr. Samuel Kent was elected vice-president to succeed Dr. Hamner.

Three Lynchburg College alumni were recently honored by presentation of the Thomas Gibson Hobbs Memorial Awards, and one of these was Dr. Hamner.

#### **Drs. Blankinship and Saunders Honored.**

Dr. Rex Blankinship, medical director of Westbrook Sanitarium, Richmond, was chosen president of the National Association of Private Mental Hospitals at the recent meeting of the American Psychiatric Association in St. Louis.

Dr. John R. Saunders, associate resident physician at Westbrook, was named secretary of the national assembly of district branches of the Association.

#### **Northern Virginia Clinical Assembly.**

The Fifth Annual Assembly was held on April 25th from 10:00 A.M. to 5:00 P.M. The Magnolia Room of Hunting Towers in Alexandria served as the meeting-place.

As usual, the event was sponsored by the Alexandria Medical Society. The Committee consisted of Dr. John D. Hoyle (Chairman), Dr. Milton R. Stein, Dr. Alvin C. Wyman, Mrs. James M. Moss, and Mrs. William J. Weaver, Jr.

Members of the Faculty at the School of Medicine of the University of Virginia presented the following interesting and informative program:

Practical Application of Isotopes in Medical Practice—Kenneth R. Crispell, Assistant Professor of Internal Medicine; Bad Results of Antibiotic Therapy—Alto Edmund Feller, Professor of Microbiology; Coronary Diseases and Their Management—Julian Beckwith, Assistant Professor of Internal Medicine; Management of Disc Disease—Juan De Dios Martinez-Galindo, Associate Professor of Neurosurgery; Menopause—William Parson, Professor of Internal Medicine; Diagnosis and Treatment of the Precancerous Dermatoses—Edward P. Cawley, Professor of Dermatology; Perinatal Mortality—Panel Discussion: McLemore Birdsong, Associate Professor of Pediatrics; George Cooper, Jr., Associate Professor of Roentgenology; William N. Thornton, Professor of Obstetrics and Gynecology.

Lunch was served from 12:00 noon to 1:30 P.M. A social hour followed the close of the meeting at 5:00 P.M.

T. F. MCGOUGH, M.D.

*Secretary*

*Alexandria Medical Society*

#### **Dr. Carrington Williams,**

Richmond, has been elected first vice-president of the Association of Surgeons of the Southern Railway System.

#### **Hospital to Be Named for Dr. Williams.**

The State's new 450 bed Negro hospital now under construction at the Medical College of Virginia will be named the Ennion G. Williams Hospital in honor of Virginia's first health commissioner. The late Dr. Williams served as health commissioner from 1908 until his death in 1931.

Now in the early stage of construction, the hospital will contain 250 beds in the tuberculosis divisions, including a 50 bed surgical-diagnostic unit,



and 200 beds in its general hospital division for medicine, pediatrics and psychiatry.

#### **Dr. Thomas S. Ely,**

Jonesville, has been named by Governor Stanley as chairman of a Virginia veterans' committee to serve in the American-Korean Foundation campaign for funds. He is commander of the Virginia Chapter of the American Legion.

#### **The Gill Memorial Eye, Ear and Throat Hospital**

Recently completed its Twenty-Seventh Annual Spring Congress in ophthalmology and otolaryngology and the allied specialties. The faculty was composed of twenty-three guest speakers. There was an attendance of two hundred and seventy-five doctors representing forty-two states, Canada and one foreign country.

The Twenty-Eighth Annual Spring Congress will be held from April 4th through the 9th, 1954.

#### **Course in Postgraduate Gastroenterology.**

The National Gastroenterological Association announces that its Sixth Annual Course in Postgraduate Gastroenterology will be given at The Shoreham in Washington, D. C. on 28, 29, 30 October 1954. The Course will again be under the direction of co-chairmanship of Dr. Owen H. Wangensteen, Professor of Surgery of the University of Minnesota Medical School, who will serve as surgical co-ordinator and Dr. I. Snapper, Director of Medical Education, Beth-el Hospital, Brooklyn, N. Y., who will serve as medical co-ordinator. Drs. Wangensteen and Snapper will be assisted by a distinguished faculty selected from the medical schools and Walter Reed Army Hospital, whose presentations will cover all phases of gastrointestinal diseases and problems. The entire session on Friday, 30 October 1954 will be given at the Walter Reed Army Hospital.

For further information and enrollment write to the National Gastroenterological Association, Department GSJ, 33 West 60th Street, New York 23, N. Y.

#### **Academy of Psychomatic Medicine.**

The Program of the first annual meeting of the Academy is to be held at the Plaza Hotel in New York City on October 8-9, 1954, and will be devoted to Psychosomatic Aspects of Surgery. There will be contributed and invited papers on topics in various specialties. Those who are interested in presenting

papers should write to Dr. Benjamin Raginsky, 376 Redfern Ave., Montreal, Canada, stating their special interest.

The Academy of Psychosomatic Medicine is still receiving applications for fellowship and associate-ships, according to Dr. Ethan Allan Brown, Secretary, 75 Bay State Road, Boston 15, Mass. New fellows will be inducted into the Academy at the October Meeting in New York City, at which time certificates of membership will be presented.

#### **Associated in Orthopedic Surgery.**

Drs. Duncan and Hollins of Norfolk, announce the association of Dr. John S. Thiemeyer, Jr., at 343 Wainwright Building, 229 West Bute Street, that city. Their practice will be limited to Orthopedic Surgery.

#### **William T. Sanger, Ph.D.,**

Has become the second president emeritus in the history of the National Society for Crippled Children and Adults, the Easter Seal Society. One of the nation's most distinguished medical educators, Dr. Sanger is immediate past president of the National Society and for 26 years has been head of the Medical College of Virginia. He was elected to his new honorary post by the unanimous vote of the Easter Seal Society's Board of Trustees, which met in Chicago's Palmer House April 23.

The first President Emeritus of the National Society was the late Col. Elbridge W. Palmer, of Kingsport, Tenn., who served as president for nine years until 1949. Colonel Palmer died in New York last November 18.

#### **Lewis-Gale Hospital Annual Dinner.**

The Annual Dinner meeting of the Lewis-Gale Hospital was held on April 14 at the Hotel Roanoke. About two hundred members of the hospital group and their physician guests heard Dr. E. H. Rynearson, Chief of Metabolic Diseases of the Mayo Clinic speak on "Syndromes Associated with Tumors or Hypertrophy of the Adrenal Gland: the Results of Total or Subtotal Adrenalectomy".

#### **The Duke Medical Post-Graduate Course**

Will be given at Duke Hospital, Durham, N. C., June 14, 15, 16 and 17. An excellent program has been arranged which will furnish much of special interest to the general practitioner. Ward Rounds and Visits to the Clinics will be available each day. The speakers will be members of the Duke Faculty.

The registration fee is \$25.00. Rooms are available in the University Graduate Dormitories and meals may be obtained in the Graduate Dormitory or in the Oak Room in the University Union.

#### **Dr. Hudnall Honored.**

Dr. R. L. Hudnall, Lilian, was guest of honor at a celebration on May 4th which marked his golden anniversary as a country doctor who has practiced for fifty years in Northumberland County. More than 500 of his friends were present and he was presented with a cash gift. He has missed only one day's practice and that was in 1930 when a blizzard kept him snowbound all day before the roads were cleared.

#### **American Surgical Society.**

Dr. John H. Gibbon, Jr., director of surgical research at the University of Pennsylvania, is the new president of this Society, having been elected at the annual meeting held in Cleveland the last of April.

#### **Southern Pediatric Seminar.**

The 34th annual session of the Southern Pediatric Seminar will be held in Saluda, N. C., July 12th-31st. This is a course in internal medicine, obstetrics and gynecology, and pediatrics, with the newest methods of diagnosis, prevention and treatment. The lecturers are among the finest medical authorities in the South, and they will stress the solution of ordinary daily problems in the most modern, scientific and satisfactory way. Credit for attendance is accepted by the American Academy of General Practice and the only expense is the registration fee of \$25.00 per week. Registration for one week is accepted.

For information and registration, address M. A. Owings, secretary-treasurer, Saluda, N. C.

#### **Dr. Franklin S. Kincheloe,**

Recently of Asheboro, N. C., has become a staff physician of the Richmond Health Department, with duties to be at Pine Camp Hospital and the Diag-

nostic Chest Clinic.

#### **Inter-Society Cytology Council.**

The second annual meeting of the Council will be in Boston, at the Statler Hotel, November 12 and 13, 1954. Those having material to present are invited to submit three copies of the title and an informative abstract of not more than 200 words to Dr. John B. Graham, Chairman of the Program Committee, 32 Fruit Street, Boston, Massachusetts, before July 15, 1954.

The authors of papers, selected for presentation, will be notified by September 30, 1954.

You are urged to make reservations directly with the Reservations Manager, Statler Hotel, Boston, Massachusetts.

Registration will be open to everyone interested in Cytology. Registration fee for physicians is \$5.00; for cytologic-technologists, technicians and others, \$2.00. Medical students, internes and residents will be admitted without charge.

An informal cocktail party and dinner will be held Friday night, November 12. The annual business meeting will follow the luncheon at 12:30 Saturday, November 13.

For additional information please contact the Secretary-Treasurer, Inter-Society Cytology Council, 634 North Grand Blvd., St. Louis, Missouri.

#### **For Sale—**

40-bed well equipped, small town hospital. Address Physician's Hospital, Incorporated, Warrenton, Virginia. (*Adv.*)

#### **Doctor's Office—**

Ideal location outside of Washington in expanding community of Alexandria, Virginia. Complete 5-room house available for use as an office in area needing services of a physician. Owners willing to assist Doctor to get started. Telephone Mr. Charles Gerstein for appointment—TE-6-9378—or write him at 13 East Myrtle Avenue, Alexandria, Virginia. (*Adv.*)

## OBITUARIES

---

### Dr. Alexander Emmett Turman,

Prominent Richmond physician, died May 10th, following a long illness. He was eighty-five years of age and a graduate of the Medical College of Virginia in 1893. After his graduation, Dr. Turman served for eight years at the Virginia State Penitentiary Farm as its first surgeon, after which time he located in Richmond. He was a member of several fraternal and medical organizations and the Richmond Rotary Club. Dr. Turman was a Life Member of The Medical Society of Virginia, having joined in 1894. A daughter, a sister and a brother, Dr. John W. Turman, also of Richmond, survive him.

### Dr. John Hampton Hare,

Warsaw, died April 19th at the age of sixty-nine. He was a graduate of the former Maryland Medical College in 1905. Dr. Hare was formerly a member of The Medical Society of Virginia. His wife and four children survive him.

### Dr. Frederick Pilcher,

A native of Petersburg, died May 6th at his home in Calgary, Alberta, Canada. He was forty-seven years of age and a graduate in medicine from the University of Virginia in 1931. His wife and a son survive him.

### Resolutions on Dr. Leo

Dr. Louis S. Leo was born in New Haven, Connecticut, on March 16, 1904. His family moved to Norfolk, Virginia, shortly afterwards and he attended the local grammar schools and high school. He received his Bachelor of Science degree from the University of Richmond and in 1927 received his M.D. degree from the Medical College of Virginia. He served his internship in St. Elizabeth's Hospital, Covington, Kentucky and in Mercy Hospital, Chicago. After completing a residency in E.E.N.T. in the Illinois Eye and Ear Infirmary, Chicago, he opened his office for the practice of his specialty in Houghton, Michigan in 1929. However, his desire to improve his knowledge and learn newer techniques forced him to leave his large practice and in 1932, he spent a year in Berlin and Vienna taking post-graduate courses in Eye, Ear, Nose and Throat. Upon his return to his

practice, he was appointed an instructor at the University of Michigan Medical School and served in that capacity until 1940.

Although he had a flourishing practice in Michigan, Dr. Leo had frequently expressed a desire to return to Norfolk. In this, he had the moral support of his wife, who was also a native of Norfolk. In 1940, he made the decision to return to his adopted home and that year, he opened his office in the Wainwright Building. Having received flight instruction and a license to pilot a plane while in Michigan, shortly after the outbreak of World War II, Louis Leo volunteered for duty with the Army Air Forces. He served for four years as a flight surgeon, serving most of the time in the European Theatre. While on a flight with his squadron on a bombing mission over Europe, he received injuries for which he was awarded the Purple Heart. He was discharged in 1946 with the rank of Lt. Colonel and returned to Norfolk to resume his practice.

His devotion to his practice plus his thorough knowledge and unusual skills soon reflected itself by the rapid growth of his practice. His interest in plastic surgery resulted in greater achievements and his skilled accomplishments in this field were unsurpassed. His original investigative studies in the treatment of retinitis pigmentosa won for him well-deserved praise. He was a Fellow of the American College of Surgeons, a member of the local and state medical societies as well as of the Tidewater Virginia Ophthalmological Associations. He was on the Attending Staffs of De Paul, Norfolk General and Leigh Memorial Hospitals.

In addition to his practice, Dr. Leo found time to associate himself with many civic organizations. He was a past-president of the Talbot Park Civic League, a member of the Norfolk Association of Commerce, Torch Club, and he was a Mason. He was also a talented sculptor and painter.

On March 17, 1954, several hours after sustaining a coronary thrombosis, Dr. Louis S. Leo passed to a better world. He is survived by his parents, his wife, two daughters, and one grandson.

BE IT RESOLVED that on this day, April 5, 1954, these resolutions on Dr. Louis S. Leo be incorporated into the records of the Norfolk County Medical Society and a copy be sent to his family.

BERNARD LIDMAN, M.D.

C. C. COOLEY, M.D.

M. R. WHITEHILL, M.D.

ALFRED L. KRUGER, M.D., *Chairman.*



accuracy every time

# Clinitest<sup>®</sup>

BRAND

for detection of urine-sugar

"Both *Clinitest* and Benedict's qualitative test are completely accurate when properly performed."<sup>1</sup>

but

"...there are fewer sources of error with *Clinitest*."<sup>1</sup>



and

"The routine Benedict test...is seldom well performed because of the difficulties of accurate measurement of reagent and urine and because of the practical difficulties of uniform heating; the much simpler and more readily standardized tablet test is to be preferred..."<sup>2</sup>



1. Cook, M. H.; Free, A. H., and Giordano, A. S.: *Am. J. M. Technol.* 19:283, 1953.

2. Gray, C. H., and Millar, H. R.: *Brit. M. J.* 4824:1361 (June 20) 1953.

*Ames Diagnostics—Adjuncts in clinical management*



## AMES

COMPANY, INC • ELKHART, INDIANA

Ames Company of Canada, Ltd., Toronto

# PABLUM

*supplies the missing link  
in the infant's diet*

**... provides 70% of the  
infant's Recommended Daily  
Allowance of iron**

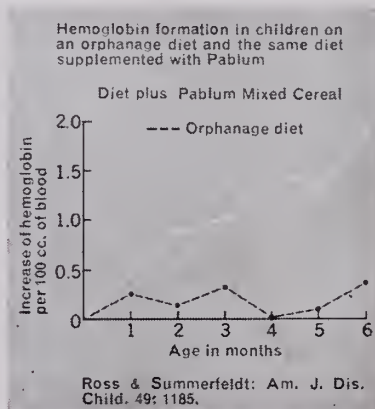
In addition to its superiority as "the infant's first solid food," Pablum is specially iron-enriched to provide prophylaxis against iron deficiency anemia which is so prevalent in infancy.

"The most common nutritional deficiency" in infants and children is a deficiency of iron.<sup>1</sup> When inherited iron stores are exhausted, neither breast milk nor cow's milk formulas provide a satisfactory iron intake.<sup>2</sup>

One-half ounce of Pablum® (the usual daily feeding) supplies the infant with 4.3 mg. of elemental iron. This is 70% of the Recommended Daily Allowance for infants under 1 year. One ounce of Pablum supplies 141% of the R.D.A. for infants under 1 year and more than 100% of the Allowance for children up to 6 years.

Pablum cereals provide definite and specific contributions to the nutrition of the infant, as both laboratory and clinical studies proved (see chart).

Rigid bacteriologic control . . . exclusive and exacting manufacturing . . . modern packaging—all protect the fresh, clean taste and fine texture of Pablum cereals.



1. Smith, N. J., and Rosello, S.: J. Clin. Nutrition 1: 275, 1953;  
2. Jeans, P. C., in A.M.A. Handbook of Nutrition, ed. 2, New York, Blakiston, 1951, p. 280.

*Specify*  
**PABLUM CEREALS**  
*by name*

**PABLUM MIXED CEREAL**  
**PABLUM OATMEAL**  
**PABLUM RICE CEREAL**  
**PABLUM BARLEY CEREAL**

# VIRGINIA

## MEDICAL MONTHLY

### *Contents*

Recent Developments in the Treatment of Acne and of Rosacea,  
George H. Curtis . . . 306

Low Back Pain and Sciatica, Wm. Minor Deyerle and  
Virgil R. May, Jr. . . . 312

Some Skin Manifestations of Internal Disorders, Edwin E. Barksdale, Com-  
mander John D. Walters and Lieutenant Arthur B. Kern . . . 321

Tumors of the Salivary Glands, John L. Thornton, Gordon R. Hennigar and  
Saul Kay . . . 326

Cardiac Arrest, Report of a Case with Complete Recovery, John E. Alexander  
and Robert L. Coulter . . . 332

The Clinical Use of Nalline® As A Narcotic Antagonist,  
Harold F. Chase . . . 334

(Continued on page 6)

DEPT. OF MEDICINE

JUL -7 1954

LIBRARY.

**sustains contraction of postpartum uterus**

# 'Ergotrate Maleate'

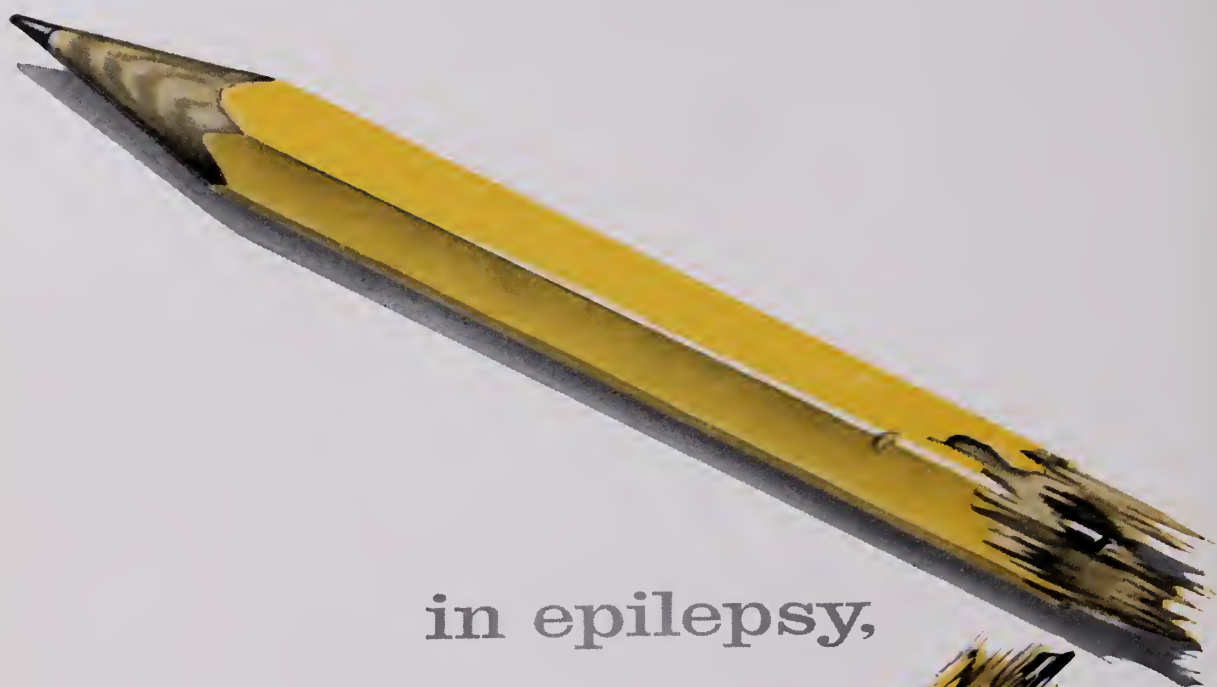
(ERGONOVINE MALEATE, U.S.P., LILLY)

**to prevent hemorrhage, lessen risk of infection**



IN 1/320-GRAIN TABLETS AND AMPOULES





in epilepsy,



# Virginia Medical Monthly

Vol. 81, No. 7  
WHOLE No. 1225

RICHMOND, VA., JULY, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## *In Memoriam*

**AGNES V. EDWARDS**  
1877-1954

**Executive Secretary-Treasurer, The Medical Society of Virginia**  
1924-1950

**Managing Editor, Virginia Medical Monthly**  
1919-1954



The Virginia Medical Monthly has sustained a serious loss in the passing of Miss Agnes V. Edwards. As managing editor of the Monthly for more than thirty-five years she devoted herself assiduously to the welfare of the publication which had been started by her father, Dr. Landon B. Edwards. Her indispensable role in the life of the Monthly was well eulogized in the August, 1951 issue. She was loved by all who knew her and especially by those who were fortunate enough to be associated with her in the offices of the Virginia Medical Monthly.

## RECENT DEVELOPMENTS IN THE TREATMENT OF ACNE AND OF ROSACEA\*

GEORGE H. CURTIS, M.D.,  
Cleveland, Ohio

It has been estimated that acne vulgaris comprises about 15 per cent of the skin diseases treated by dermatologists. The incidence among the general population probably is much higher, comprising as high as 75 per cent of skin eruptions in adolescents and young adults. In the majority of individuals, acne is relatively mild and spontaneously disappears. However, even mild acne will leave some scarring, and moderate-to-severe acne leaves permanent scarring—in many instances, disfigurement. Although most acne patients may be assured that the disease will disappear by the end of the third decade, it is very much worth while to exert every effort to cure acne at as early an age as possible, to prevent the stigmata being stamped on the face for life. The psychologic impact of the disfiguring ugliness of acne and its scars on our young people causes much suffering and sometimes severe psychoneurosis.

Similarly, adults acquiring rosacea, usually in the thirties and forties, labor under a psychologic handicap. The young matron who enters the social whirl to further her husband's interests becomes aware of the plague of rosacea. As the eruption wanes and waxes, she alternately lives in hope and in despair. After several years, she becomes a "tied-down-to-home" psychoneurotic. The husband, a promising salesman, executive, or business owner, working long hours, drinking heavily, entertaining his clients and prospects with rich food and drink, also becomes afflicted with rosacea. His nose may show the first signs: bright-red dilated veins interspersed with bright-red to purplish papules and pustules; then the tip of the nose begins to enlarge. (An executive vice president of a corporation recently said to me: "Doctor, I feel like 'Rudolph, the Red-nosed Reindeer'!")

I believe general physicians are consulted by a greater number of people with these conditions than are the dermatologists. With the currently available antibiotics, sex hormones, vitamins, and topical medicaments compounded by our ethical pharmaceutical companies, the general physician may obtain

satisfactory results in many patients reached by him only.

In the following outline of treatment, I wish to stress the use of sex hormones, antibiotics, and vitamins in the treatment of acne and of rosacea.

In the Cleveland Clinic, the routine management of acne and of rosacea is as follows: The first step is to improve the general health of the patient. In this we are guided by information obtained in the clinical history, physical examination, and the laboratory data. The physical examination may indicate further studies for focal infection in the teeth, sinuses, tonsils, prostate. In some patients, elimination of foci is necessary, while in others treatment with the antibiotics and/or the sulfonamides will suffice. The hemogram may indicate anemia, and the presence of a focus of infection may be indicated by a leukocytosis. Urinary tract infection may be discovered by the urinalysis. Adequate sleep, fresh air, and exercise are prescribed along with the correction of constipation.

In acne patients, iodized salt, nuts, chocolate, fish, and shell-fish, particularly sea food, cheese, and vegetables with high-iodine content are eliminated from the diet. Carbohydrates, fats, and proteins *per se* have no adverse influence on acne, but individual foods may have. During the course of management when exacerbations are not otherwise explainable, experimental withdrawal and readdition of foods such as milk, eggs, wheat, pork, and fresh-water fish are undertaken. Patients are instructed to avoid all medicines and proprietary medications containing bromine and iodine.

If the history and observation of exacerbations in women are carefully evaluated, one will discover a surprisingly frequent correlation between onset of exacerbations and periods of menstruation. Usually, the exacerbations appear premenstrually, but may rarely occur during or a little after the period. Here, the estrogens are most useful. On the advice of our endocrinologists we are using stilbestrol, 0.25 to 1.0 mg. daily, from the first to the twenty-fifth day of the menstrual cycle. In the average case, 0.5 mg. is prescribed; to date, we have not found it necessary

\*Read before Richmond Academy of Medicine, meeting at Richmond, Va., Jan. 12, 1954.

From the Department of Dermatology, the Cleveland Clinic, and the Frank E. Bunts Educational Institute, Cleveland, Ohio.



to prescribe more than 1.0 mg. daily. In about one-fourth of the cases, estrogens cause some menstrual disturbances from delayed menstruation or skipping of periods, to prolonged bleeding that, so far, is rare. Delayed menstruation or skipping of period may be prevented by reducing stilbestrol to 0.25 mg. or to 0.1 mg., or by administering progesterone, 25 mg. intramuscularly every second day for two or three injections, such that the last injection is given four days before the expected period, and the estrogen is

about twice that which had been administered before the onset of bleeding, continuing it for several days to a week; progesterone is then administered in 25-mg. doses for three injections, and both hormones are then discontinued. I have had only one case requiring the foregoing treatment. In another case, mild bleeding lasted 14 days and stopped spontaneously.

We have been reluctant to use the hormones in men until further information about the long-range effects



Fig. 1. The patient, aged 19 years had had acne for three months and had received two x-ray treatments, 16 penicillin injections and a combination low-fat and low-"sweet" diet. Stilbestrol stopped the premenstrual flares in three months. Comedones had almost entirely disappeared after eight months of vitamin A.

discontinued at that time. If stilbestrol causes severe nausea or vomiting, estrone sulfate (Premarin®) is substituted in comparable or slightly reduced dosage. It may be necessary to administer the hormones from three to six months to stop the premenstrual flares. We have no hesitancy in administering the estrogens to young girls early in puberty. If prolonged withdrawal bleeding occurs, stilbestrol may be increased anywhere up to 5 mg. every hour until bleeding stops, then the dosage is reduced to

of the estrogen on the testes is at hand. However, Dr. George Andrews<sup>1</sup> has administered the hormones in doses of 0.25 mg. for more than a year without obvious harmful effects. Dr. Andrews prescribes rest intervals for men.

Administration of the estrogens in adolescents is attended with some difficulty in persuading parents to consent to their prolonged use. The principal objection by parents is based on their fear of the possible carcinogenic effects and the upsetting of the

normal physiology both in boys and in girls. Mothers become frightened when their daughters' periods are skipped. Young married women fear that it means pregnancy.

The antibiotics are indicated in pustular, nodular, and cystic acne. Usually 100 mg. to 250 mg. doses of Terramycin® or Aureomycin®, or Erythromycin® 100 mg. to 200 mg., four times daily are prescribed for several months if necessary. As soon as definite improvement ensues, the dosage is reduced to about

ment with vitamin A must extend over many months. Water-soluble vitamin A is preferred.

Local treatment of the skin continues to be important in acne as well as in rosacea. Incision and drainage of cysts and pustules, and extraction of comedones should be done regularly. Cleansing the skin two or three times daily with soap and water, or with soap containing hexachlorophene (Phiso-hex®) will aid in the removal of comedones and prevent infection. An excellent preparation for



Fig. 2. The patient, aged 18 years had had nodular and cystic acne for three months and had had no treatment. Stilbestrol 0.5 mg. daily stopped the premenstrual flares. Despite topical therapy the face continued to be oily; x-ray treatments reduced the seborrhea and hypertrophied scarring.

100 mg. daily. Concomitant administration of the estrogens and antibiotics is extremely useful, particularly so when there are menstrual exacerbations. Occasionally it may be necessary to substitute one of the sulfonamides, usually sulfadiazine, for the antibiotics.

In acne simplex, in which comedones and follicular plugging are predominant features, vitamin A, from 100,000 to 200,000 units daily, is indicated, along with the estrogens and local treatment. Treat-

ment with vitamin A must extend over many months. Water-soluble vitamin A is preferred. Local treatment of the skin continues to be important in acne as well as in rosacea. Incision and drainage of cysts and pustules, and extraction of comedones should be done regularly. Cleansing the skin two or three times daily with soap and water, or with soap containing hexachlorophene (Phiso-hex®) will aid in the removal of comedones and prevent infection. An excellent preparation for

nightly use is Vlemineckx's solution (diluted 1:20 in hot water) as wet dressings. There are a number of good lotions and ointments, most of which contain resorcin and sulfur which aid in the removal of comedones by maintaining a continuous scaling of the skin. I have found 5 per cent sulfadiazine ointment satisfactory in infected acne. I believe the estrogens put up in the form of lotions and/or greaseless creams are more satisfactory in men than in women. Greasy cosmetics are prohibited.

Acne is usually accompanied by seborrhea of the scalp as dandruff and oftentimes a mild seborrheic dermatitis along the hairline. A new preparation containing selenium bisulfide (Selsun®) is excellent and may be applied according to the directions in the package every five days to two weeks.

Rosacea, like acne, is considered by many to be a manifestation of the seborrheic diathesis which, in turn, seems to be influenced by the androgens and estrogens. Except when it occurs in infancy, se-

be suspected and investigated.

There seems to be some relationship between carbohydrate storage in the skin and seborrhea, inasmuch as a low-carbohydrate diet is beneficial in both seborrhea and rosacea.

The vitamins, especially vitamin B complex, are useful. Routinely, we prescribe along with a low-carbohydrate diet a multivitamin containing adequate amounts of A and D; in the moderate-to-severe cases, crude liver extract in weekly doses of 2 cubic centi-



Fig. 3. The patient, aged 17, had had acne for three years. Eleven x-ray treatments produced temporary improvement. He had received a low-fat diet. Terramycin ® produced some improvement in two months, and stilbestrol 0.5 mg. daily was added. Flares ceased after three months.

borrhea appears at puberty or shortly before. Rosacea is usually seen in persons who have seborrhea and neurovascular instability, the principal sign of which is flushing. The flush may be precipitated by embarrassment, hot rich food and beverages, and alcohol. One cannot overlook the repeated observations that exacerbations follow the eating of rich foods and condiments, and drinking at cocktail parties. In women, premenstrual exacerbations are frequent. In obstinate cases focal infection should

be suspected and investigated. In some cases in which hypochlorhydria is found, hydrochloric acid is indicated. Those patients with rosacea who drink alcoholic beverages should avoid them.

The estrogens will usually stop premenstrual exacerbations. The dosages are the same as for acne. I have recently been prescribing Acnestol®, a preparation containing stilbestrol, thyroid and cascara, administered in 1 to 2 tablets daily, with satisfactory results.



In the more severe forms of rosacea with much congestion of the skin and numerous torpid pustules and nodules, the antibiotics often rapidly provide relief.

The management of rosacea cannot be adequately carried out without topical treatment, but a few precautions must be observed. Many patients cannot tolerate the drying and scaling lotions prescribed for acne. It is advisable to begin with low concentrations of the ingredients of ointments and lotions. I

The amount of Quinolor® ointment may later be increased to 5 or 10 Gm.

	<i>Gm. or cc.</i>
3. Betanaphthol	1.0
Sulfur precipitate	2.0
Balsam Peru	7.5
Petrolatum or greaseless cream q.s. ad	30.0

This ointment is weaker and should be prescribed



Fig. 4. The patient, aged 31 years had had severe recurrent rosacea for two years and had received 12 x-ray treatments with temporary improvement. Topical treatment, a low-carbohydrate diet and stilbestrol 0.25 mg. daily brought about improvement but did not stop the flares. Stilbestrol was increased to 0.5 mg. and the flares ceased in three months. The patient experienced a flare following a cocktail party. Three months later she had had a hysterectomy and bilateral oophorectomy and had discontinued the regimen. Four months later the rosacea recurred and subsequent dosage of stilbestrol 1.0 mg. for 25 days of the month was found necessary to stop flares.

have three standard ointments that I use first, before prescribing any others:

1. 5 per cent sulfadiazine ointment for severe pustular rosacea.

2. Salicylic acid

Sulfur precipitate

Ung. Quinolor® of each

in Petrolatum or greaseless cream q.s. ad
- Gm. or cc.*

1.0

30.0

first. In the stronger ointment the concentration of the ingredients is doubled. These ointments usually produce a burning sensation for a few minutes and patients should be forewarned of the effect. The betanaphthol-containing ointments are applied once or twice daily for periods of four to five days only, with rest periods of three to five days, otherwise, they will irritate the skin. Betanaphthol ointments stain bed clothing, so that patients should be warned to use

old pillow cases.

If these ointments are not too well tolerated they may be discontinued for a time and wet dressings with Vlemineckx's solution, or a lotion containing glycerite of tannin 10 per cent to 15 per cent in witch hazel, or boric acid compound lotion may be substituted:

Rx.	Gm. or cc.
Glycerine	4.0
Extr. witch hazel	30.0
Alcoholic solu. boric ac.	30.0
Aq. rosae q.s. ad	120.0

I would like to mention a recent development in the treatment for acne scars. In the past, the scarring caused by acne has presented a real problem and various methods, such as CO<sub>2</sub> slush, scarification, occasional whole-skin grafting and the like have been tried with indifferent results. The sandpaper method, and more recently the wire brush method, devised within recent years is producing favorable results. However, there is an untoward late sequela in some patients. I have seen one patient in whom numerous miliums or white heads developed following sandpapering. It seems likely that the incidence

of this complication will increase as the popularity of the treatment increases.

In conclusion, may I quote from a special article by Doctors Sulzberger and Baer<sup>2</sup>:

"There is no doubt that the management of difficult cases of acne lies in the realm of the dermatologist and may require highly specialized therapeutic procedures, such as x-ray therapy. However, in view of the almost universal prevalence of acne vulgaris, collaboration in management or even sole responsibility for the treatment of many is the inescapable duty of *all* physicians and particularly of all family physicians. . . ."

In my opinion, this statement of a physician's responsibility applies also to the treatment of rosacea.

#### REFERENCES

1. Andrews, G. C., Domonkos, A. N., and Post, C. F.: Treatment of Acne Vulgaris, *J.A.M.A.*, **146**: 1107-1112, 1951.
2. Sulzberger, M. B., and Baer, R. L.: *The 1949 Year Book of Dermatology and Syphilology (November, 1948-December, 1949)*, Chicago: The Year Book Publishers, 1950, p. 10.

*Cleveland Clinic,  
2020 East 93rd Street.*

#### New Pamphlets for Doctors' Waiting Rooms.

The American Medical Association's PR Department has just completed publication of four new pamphlets describing medical scientific achievements, doctors' services to the community, and their desire to provide high quality medical care to everyone.

Subjects of the four are: 1) "Quack!"—explains the dangers of going to quack healers for medical treatment; 2) "Health Today!"—tells about medi-

cine's progress during the past 50 years; 3) "On Guard!"—outlines the steps A.M.A. has taken to evaluate drugs, and 4) "Why Wait?"—describes the best way to select a family doctor.

Available in quantity, the pamphlets are suitable for distribution in doctor's waiting rooms, as enclosures or as give-away material at schools and at general meetings. Physicians may order either individual pamphlets or the entire series—without charge—from their state medical societies.

## LOW BACK PAIN AND SCIATICA\*

WM. MINOR DEYERLE, M.D.,

and

VIRGIL R. MAY, JR., M.D.,

Richmond, Virginia

The close relationship of low back pain and sciatica makes it essential to consider the two together. When we review the pathological physiology and anatomy of the low back,<sup>1,2,3</sup> the above relationship becomes more obvious.

There are 10 joints with synovial capsules as well as their supporting ligaments, fascia and muscles. There are also 5 intervertebral joints (amphiarthroidal joints) and the 2 sacro-iliac joints. All of these joints are subject to the joint injuries and other pathological conditions found in joints. All are supplied by a posterior division of a lumbar or sacral nerve. Irritation arising in any of these areas may, therefore, cause back pain and referred sciatica with a resulting muscle spasm and sciatic scoliosis. Pathological conditions which may produce this syndrome are as follows:

- A. Tuberculosis
- B. Osteomyelitis
- C. Tumors
  - (1) primary
  - (2) metastatic
- D. Arthritis
- E. Undulant fever
- F. Typhoid fever
- G. Gynecological and urological conditions
- H. Miscellaneous systemic causes
- I. Fibrositis and myositis
- J. Mechanical causes.

The differential diagnosis in these conditions depends upon a careful history and physical examination with approximate x-rays and laboratory aids.

This discussion will deal primarily with the diagnosis and treatment of mechanical causes of back pain and sciatica.<sup>4</sup> These mechanical causes may be:

- A. A single stress, such as acute back strain.
- B. Repeated stresses, such as repeated injuries or obesity.

C. A mechanically weak back.

A mechanically weak back may produce symptoms spontaneously and is predisposed to repeated episodes of back and leg pain because it is more vulnerable to stress or injury. The mechanically weak back is manifested in 4 ways which may be present separately, or as a group:

- A. An increase in the lumbo-sacral angle of over 52 degrees.<sup>8,9</sup>
- B. Increase in the mobility of the lumbo-sacral area resulting from:
  - (1) Obliquely placed or malformed facets.<sup>5,9</sup>
  - (2) Spondylolysis (defect in the pars interarticularis)<sup>21</sup>
  - (3) Spondylolisthesis
  - (4) Degeneration of, or excision of, an intervertebral disk (without surgical fusion).
- C. Decrease in size of the intervertebral foramen,<sup>5,6,7</sup> which makes the nerve root more vulnerable to pressure. This is demonstrated in:
  - (1) Rupture or excision of an intervertebral disk without proper surgical fusion with the intervertebral foramen propped open. When there is narrowing of the disk space, subluxation of the facet joints occurs, which causes a narrowing of the intervertebral foramen. X-rays often show this narrowing, and also posterior displacement of the superior vertebra on the one below; i.e., L5 on the sacrum.<sup>5</sup>
  - (2) Hypertrophy of the cartilagenous plaque in spondylolisthesis or spondylolysis. Nature's effort at repairing this cartilagenous defect often forms osteophytes and these, or the hypertrophied cartilagenous plaque, may actually press directly on the nerve.<sup>18,19</sup>
  - (3) Spondylolisthesis.<sup>19</sup>
  - (4) Congenital anomalies.<sup>5,9</sup>
  - (5) Arthritis of the bodies and facets with spur formation.

\*Read before the Richmond Academy of Medicine, November 10, 1953.



- (6) Edema of facet joints from simple sprains.
  - (7) Edema of a traumatized or degenerative disk.
- D. Decrease in strength of muscular and ligamentous support of disks and facet joints.
1. Posterior longitudinal ligament and annulus fibrosa (degenerated)
    - (a) Old age thinning.<sup>10,11,12</sup>
    - (b) Spinal puncture perforating the posterior longitudinal ligament.<sup>15</sup>
    - (c) Repeated mild injuries to the supporting structures.
  2. Loss of normal muscle support and tone, sometimes seen in pregnancy.

interarticularis, or even bone proliferation in the form of ossicles in this defective area, may also cause direct pressure.

Even in cases of direct pressure, edema plays a part. The nerve itself, as well as the surrounding tissue, becomes edematous as a result of pressure and irritation. It is the subsiding of this edema in the nerve and surrounding tissues that allows many cases of back pain and sciatica to respond to rest and conservative treatment. For this reason, we believe that even the most severe case of sciatica deserves a trial of conservative treatment.

#### HISTORY AND PHYSICAL

A typical history and physical is as follows: Fol-



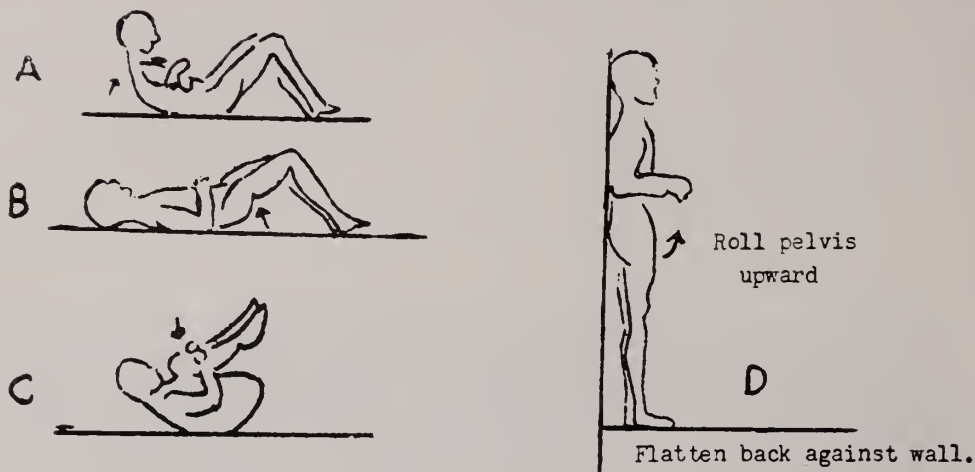
Fig. 1. Fowler's position, flattening the lumbar spine and increasing the size of the intervertebral foramen. (Courtesy Journal of Bone and Joint Surgery)<sup>14</sup>.

All of these conditions allow an increased stress and strain on the structures surrounding the intervertebral foramen, and these, in turn, predispose to disk degeneration and injury (rupture) or other pressure on the nerve root.

In cases of degeneration or rupture of a disk,<sup>10</sup> as well as spondylolisthesis, the intervertebral foramen is altered and the nerve is more vulnerable to pressure. This pressure may be the result of edema of the surrounding structures, such as the capsule of the facet joints or the disk, and it may be due to direct pressure from a ruptured or protruding disk; or from bone, as in arthritis and the spurs associated with it. Excess cartilage in the defect in the pars

allowing varying degrees of trauma, the patient has a mild disability because of back pain, and the onset may be spontaneous with no known trauma. Usually, the attack lasts for 1 to 2 weeks and subsides spontaneously. This is followed by repeated attacks which are often relieved by manipulations from chiropractors or osteopaths. Later on, the attacks become more severe and tend to radiate further into the leg and down to the foot. The patient is increasingly disabled and is no longer relieved by the above mentioned manipulations. He often volunteers that any lifting brings on an attack and during an attack, coughing and sneezing causes a reproduction of his leg pain. He often notes that he is pulled forward

POSTURAL INSTRUCTIONS FOR PAIN  
IN THE LOWER BACK



IMPORTANT INSTRUCTIONS

1. Never sleep on your abdomen. Sleep on your side with your knees drawn up.
2. Never bend backward or reach up bending backward.
3. Do not lift loads in front of you above your waist line.
4. Sit with the pelvis rotated forward in a slightly "slumped" position.

ADDITIONAL INSTRUCTIONS WHICH ARE DESIRABLE BUT NOT ESSENTIAL

1. When possible elevate the knees higher than the hips when sitting. This is especially true when driving or riding as a passenger in an automobile.
2. Avoid standing as much as possible.
3. Avoid high heels as much as possible.

Fig. 2. Exercises flexing the lumbar spine and opening up the intervertebral foramen.

and to one side during his acute attacks. During remissions the patient is frequently completely pain free. He has usually had several trials of conservative treatment with bed rest, and these seem to help the recovery of the periodic attacks. Eventually, the attacks become severe enough that the patient is disabled and he may describe a burning or numb sensation in his leg or foot, and at times describes a sensation of crawling over the skin.

PHYSICAL FINDINGS

The patient walks with a limp favoring the affected side, and is often flexed and pulled forward with sciatic scoliosis. This may be away from the affected limb but is occasionally toward the affected

limb. The patient is frequently relieved by a hyperflexed position of the spine, which tends to open up the intervertebral foramen. Pain may be reproduced in any of the following ways:

- (1) Jugular compression test.
- (2) Deep pressure over the 4th and 5th lumbar interspaces.
- (3) Hyperextension of the back with the patient lying in a prone position.
- (4) Straight leg raising tests.

The straight leg raising is positive on the affected side and leg raising on the opposite side may cause pain to be referred back to the affected limb.

Neurological findings are weakness of dorsiflexion



Fig. 3. Adjustable padded flexion frame.



Fig. 4. Patient in position on flexion frame. The posterior interlaminar spaces are opened without producing pressure over the abdominal veins.

of the great toe; loss of tone or atrophy in the calf or thigh muscles or gluteal area; decreased sensation over the skin areas supplied by the 4th or 5th lumbar dermatomes or the 1st sacral dermatome (these areas often overlap). There may be a decrease in the ankle jerk or knee jerk. During the acute attacks, extreme muscle spasm in the low back limits all low back motion. The most frequently positive findings are the leg raising tests; the ability to reproduce the pain and some neurological change. All of these

findings are not usually found in 1 case.

X-rays are routinely made in all cases in order to pick up the defects mentioned in the pathological physiology above. Myelograms are done on any case in which there seems to be suggestion of cord tumor. They are not done routinely, as it is felt that if a diagnosis cannot be made on the history, physical and x-ray findings, additional time should be allowed for further conservative treatment and, following this, the diagnosis is usually more apparent.





Fig. 5. Patient in regular prone position, no flexion.

#### CONSERVATIVE TREATMENT

This treatment<sup>13,14,22</sup> consists of rest on a hard bed with the knees and upper body elevated in Fowler's position. *Figure 1* shows how this may be done at home, but in the hospital it is easily accomplished with a Gatch bed. Tolserol, 1 gram every 4 hours, combined with local heat, helps relieve spasm, but often narcotics are necessary to relieve pain. This treatment is continued from 10 days to 3 months, depending upon the progress, and is supplemented by flexion exercises (*Figure 2*) after the acute pain subsides. When the patient becomes ambulatory, a flexion cast or a Williams<sup>22</sup> flexion brace is applied and worn until the patient becomes asymptomatic. The Fowler's position, exercises, brace or flexion cast all tend to open up the intervertebral foramen, thereby allowing the maximum opportunity for edema and other pressures to subside. The patient is advised to do no heavy work until all pain has disappeared and cautioned against lifting in strained positions at any time.

Those patients not improving satisfactorily under the above regime are given a Tolserol test.<sup>20</sup> 100 cc. of 2% Tolserol solution is injected intravenously over a 5 minute period. This provides muscle relaxation sufficient to produce visual vertical nystagmus. If, at this point of relaxation, the patient's ability to tolerate a straight leg-raising test is improved, we feel that he should be given further conservative treatment. If, however, the patient's

ability to tolerate a straight leg-raising test is unchanged or made worse, we feel there is probably pressure that will require surgical correction. This test is very helpful in deciding which patients will require surgery; but, in general, after the diagnosis is made, our main indication for surgery has been a repeated failure of conservative treatment.

Over a 4 year period, this conservative treatment was carried out on 728 patients with sciatica and was successful enough to prevent the necessity of surgery in all but 102 cases. Conservative treatment failed in 14% of our cases. The authors performed 102 disk explorations and spinal fusions over this period.

TABLE No. 1

Disk Pathology	
Bulging .....	11
Ruptured .....	43
Extruded .....	16
Multiple .....	2
Tight Intervertebral Foramen .....	2
Unstable Back .....	14
Spondylolisthesis or Spondylolysis .....	16
	<hr/>
	104

2 of these also had extruded ruptured disks

All of the patients we operated upon had 1 or more trials of conservative treatment prior to surgery.

TABLE No. 2

Average age .....	38 years
Laborers .....	62%

Housewives	30%
Traveling men	3%
Office workers	5%

#### OPERATIVE TREATMENT

These patients had the usual pre-operative preparation and were operated upon under endotracheal or spinal anesthesia. We feel the convex saddle frame<sup>17</sup> (shown in *Figure 3*) has many advantages over simple flexion over a pillow or breaking the table. The patient can be seen in position in *Figure 4*. This positioning has the following advantages:

- (1) The posterior intervertebral spaces are opened up to the maximum, allowing easy access to the disk area with a minimum removal of overlying bone. This can be seen in *Figure 5*, with the patient in a prone position, as compared with *Figure 6*, the same patient flexed on a frame.
- (2) There is no pressure over the abdominal veins as the abdomen hangs perfectly free. This decreases the engorgement of the dural veins and makes possible more accurate surgery with less hemorrhage, especially in exposing the nerve roots. There is also the decreased possibility of secondary complications of the venous system, such as thrombophlebitis or phlebothrombosis.
- (3) There is a free range of respiratory motion, as the diaphragm can move upward and down-

ward without any back pressure from the abdominal viscera. All patients usually receive 1 pint of blood to prevent shock. This has not been a problem, but we feel that prevention is preferable to cure in this condition.

The operative procedure followed has been a prop graft employed by one author, Virgil R. May, Jr.,<sup>14</sup> *Figure 7*, and multiple trans-facet mortise prop grafts<sup>16</sup> *Figure 8*, by the other author, Wm. Minor Deyerle. Both also use additional small cancellous chips. Both of these techniques incorporate the principle of distracting the facets sufficiently to leave a maximum of space in the intervertebral foramen, and also supply additional cancellous bone for osteogenesis. The precise mechanical stabilization makes early ambulation possible.

We routinely explore the 4th and 5th interspaces on all spinal fusions and, if necessary, also explore the 3rd interspace. All ruptured disk cases are fused. The area to be fused is determined by the amount of pathology found, and whether or not the posterior longitudinal ligament was opened in the exploration. If the posterior longitudinal ligament is opened, although no disk is found at the level at which it is opened, we feel that the spine should be fused across this area. In removing the disk, all extruded disk material is removed and any additional loose fragments within the disk space are curetted and dissected. A careful inspection is also made of the nerve roots, especially in cases of spondylolisthesis,



Fig. 6. Same patient as *Figure 5* in position over flexion frame. Note flattening of the lumbosacral angle and opening of the intervertebral foramen.

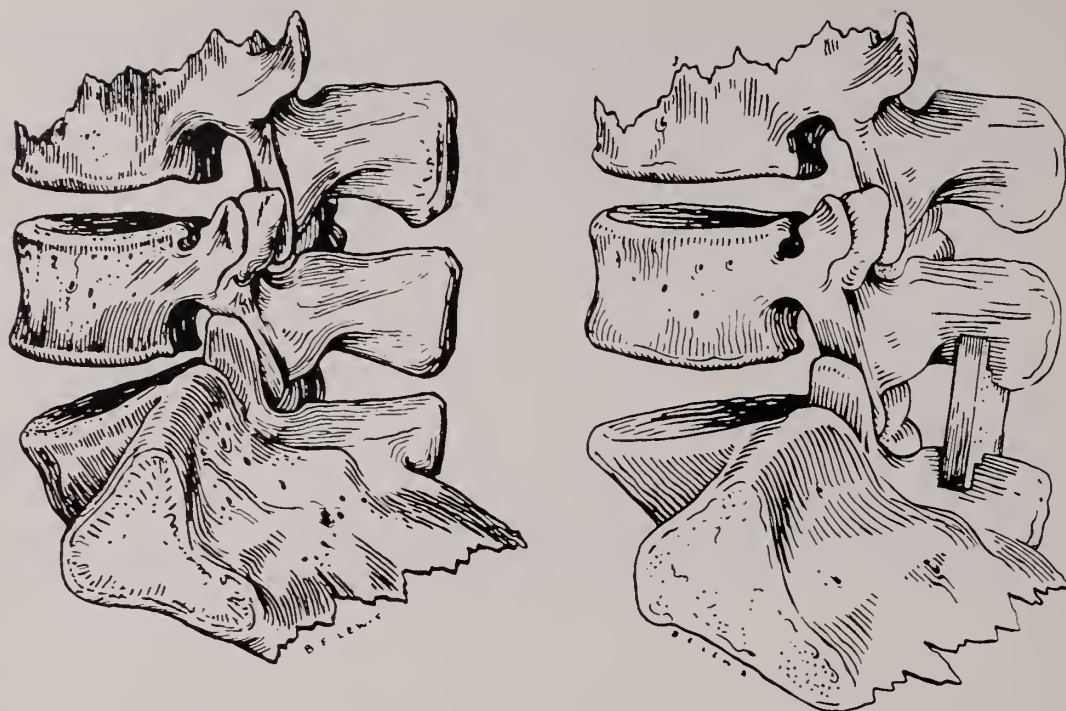


Fig. 7. Mortised interspinous prop opening interspaces. (Courtesy Journal of Bone and Joint Surgery)<sup>14</sup>.

to see whether or not there is any pressure or osteophyte formation. If this pressure is present, it is removed. The wound is closed in the routine manner with 0 chromic catgut to the fascia and 0 plain catgut subcutaneously, with silk to the skin.

We feel that in all cases in which a ruptured disk is to be removed, the spine should be fused at the time of removal of the ruptured disk, or in cases explored for a ruptured disk. It should be fused for the following reasons:

- (1) The unstable spine is the main predisposing factor in degeneration, and rupturing of a disk and the removal of the supporting structures (disk) renders it even more unable to withstand future damage.
- (2) The removal of the disk allows for the sagging of the vertebrae and a decrease in the size of the intervertebral foramen. We feel, therefore, that, from an anatomical standpoint, one should restore, in so far as possible, the normal relationships of the intervertebral foramen, and strengthen an unstable back by performing a spinal fusion.
- (3) Psychologically, a patient who has a disk removed and the spine fused in one procedure is much more able to make a complete and

total recovery than is the patient who has his disk removed and is told that, if he has any further difficulty, his spine will be fused at that time. A patient does not recover as well from two operations at separate intervals, performed in the same area, as he does from a single operation, at which time a combined procedure is performed.

- (4) Economically, a very great factor is involved. If the disk is removed at one time and 1½ years later it is found necessary to fuse the spine, the patient has two periods of total disability; two periods of partial disability; and, in all, loses twice as much time as he would if the disk is removed and the spine is fused at the same procedure. The post-operative care in our cases is essentially the same as that employed by surgeons who remove the disk only.

During the post-operative course, the patients are given liberal use of sedatives and narcotics for the first 3 to 4 days and are allowed in any position, provided they remain recumbent. It is felt that this motion is possible, in view of the excellent fixation obtained by the use of the proper graft used by both authors.



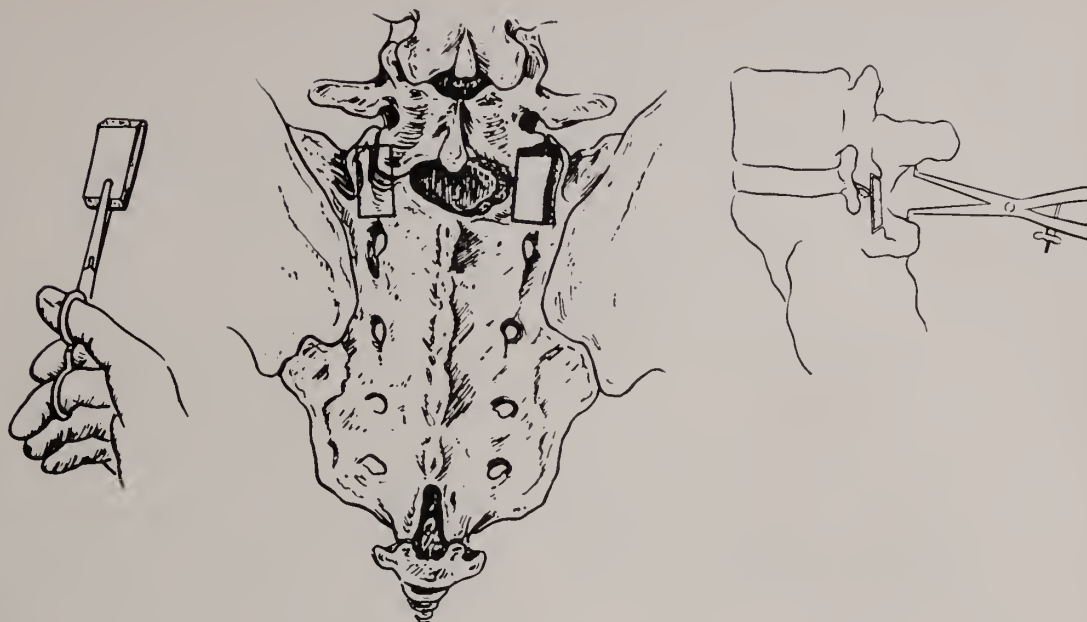


Fig. 8. Mortised transfacet bone block opening up the intervertebral foramen. (Courtesy Journal of Bone and Joint Surgery)<sup>10</sup>.

Initially, all patients were kept recumbent for 21 days following surgery and then allowed up to a cast or brace. Recently, we have been letting the patients up on the 7th day following operation, carrying out the post-operative course as described above, and the results appear to be the same. The patient is in a better frame of mind due to this shortened period of bed rest. Patients are not allowed to do heavy work for 6 months following surgery, but may return to light activities from three to eight weeks after hospital discharge.

#### COMPLICATIONS

Two cases developed stitch abscesses which responded well to antibiotics and did not, in any way, affect the results of the operation. Four cases had to be re-operated upon:

- 1 case: Developed a ruptured disk higher up.
- 1 case: Fell and fractured her spinal fusion 4 years following surgery.
- 1 case: Spondylolysis developed a pseudarthrosis post-operatively.
- 1 case: Ruptured disk, pseudarthrosis developed post-operatively.

Three of these patients have returned to their original occupations, and the fourth is too recent for follow-up. One patient died 6 weeks post-operatively at home from what was thought to be a pulmonary embolus. No autopsy was obtained.

#### RESULTS

The results were judged as follows:

**POOR:** Those patients who were not improved or benefited by their operation.

**SATISFACTORY:** Patients still complaining of some pain in back and legs, but have returned to previous occupations.

**GOOD:** Patients returned to their previous occupations and have only occasional discomfort and pain.

**EXCELLENT:** Patients who have no pain and judge their own condition to be excellent.

These results were obtained by personal interview and by sending a questionnaire when the personal interview was not possible.

#### RESULTS OF 76 SURGICAL CASES

Follow Up:		
Longest	-----	4 years
Shortest	-----	6 months
Results:		
Excellent	-----	41 or 54%
Good	-----	27 or 35%
Satisfactory	-----	4 or 5%
Poor	-----	4 or 5%

#### ANALYSIS OF THE POOR RESULTS

One case of a ruptured disk developed a pseudarthrosis; however, this patient is a severe hypochondriac and alcoholic, and has since had four surgical

procedures on other parts of his body, such as elevation of a kidney, gastrectomy, vagotomy and similar procedures. He has also been in a mental institution on one occasion. This patient, undoubtedly, has a pseudarthrosis, but it is questionable whether his symptoms are a result of this condition.

One patient was a 63 year old diabetic with a ruptured disk. She was not fused due to her age. Her complaints have been varied, and, although I am not sure that they are connected with the surgical procedure performed, I do not believe we greatly improved her by surgery. She has also been in a mental institution.

One patient had an unstable back and is able to get about in a satisfactory fashion. Examination shows no evidence of failure of fusion; however, she states that she is unable to do night work, which was her previous occupation. Consequently, we have listed her case as a poor result.

A second case of an unstable back had complaints referable to his head, extremities and abdomen. There is evidence that he has a pseudarthrosis. We are not sure whether or not this is responsible for most of his complaints, but we have ruled this case poor as he has not improved following surgery.

The one factor all of these poor results have in common is an unstable type personality.

#### CONCLUSIONS OR SUMMARY

1. There are many causes of low back pain and sciatica.
2. The above syndrome may arise from an acute back strain and may also result from a very serious mechanical weakness in the back.
3. Conservative treatment should be given a thorough trial before surgical intervention.
4. Surgical treatment should be directed at correcting the mechanical weakness by spinal fusion, in addition to removing the local pressure or disk that might be present, both procedures to be performed at one operation.

#### BIBLIOGRAPHY

1. Walsh, M. N.: Clinical and Neurological Aspects of Low Back and Sciatic Pain. *Radiology*, **33**: 681-687, December, 1939.
2. Carey, E. J.: Low Back Pains; A Symposium, Anatomical Aspect. *Wisconsin Medical Journal*, **39**: 427-446, June, 1940.
3. Mock, H. E.: Low Back Pain. *Wisconsin Medical Journal*, **42**: 389-400, April, 1943.

4. Ryerson, E. W.: Low Back Pain—A Symposium, Orthopaedic Aspect. *Wisconsin Medical Journal*, **39**: 459-461, June, 1940.
5. Haggert, G. E.: Clinical Observations on Low Back Pain and Sciatic Pain. *Surgical Clinics of North America*, 723-730, June, 1944.
6. Danforth, M. S., and Wilson, P. D.: The Anatomy of the Lumbosacral Region in Relation to Sciatic Pain. *Journal of Bone and Joint Surgery*, **7**: 109-129, January, 1925.
7. Putti, V.: On New Conceptions in the Pathogenesis of Sciatic Pain. *Lancet*, **2**: 53, 1927.
8. Von Lockum, H. L.: The Lumbosacral Region. An Anatomic Study and Some Clinical Observations. *Journal American Medical Association*, **82**: 1109-1114, April 5, 1924.
9. Ferguson, Albert B.: Roentgen Diagnosis of the Extremities and Spine, Hoeber, 1949.
10. Barr, J. S., and Mixter, W. J.: Posterior Protrusion of the Lumbar Intervertebral Disks. *Journal of Bone and Joint Surgery*, **23**: 444-456, April, 1941.
11. Saunders, J. B. de C. M., and Inman, V. T.: Pathology of the Intervertebral Disk. *Archives of Surgery*, **40**: 389-416, March, 1940.
12. Hauser, E. D. W.: Low Back Pain Due to Functional Decomposition of the Back. *Wisconsin Medical Journal*, **44**: 869-873, September, 1945.
13. Henry, M. O.: Conservative Treatment of the Disk Syndrome. *Minnesota Medicine*, **27**: 809-811, October, 1944.
14. Breck, L. W., and Basom, W. C.: The Flexion Treatment of Low Back Pain. *Journal of Bone and Joint Surgery*, **25**: 58-64, January, 1943.
15. Ralo, Frank S.: Intervertebral Disk Injury Resulting from Spinal Puncture. *Surgery*, **33**: 690-701, 1953.
16. McBride, Earl D.: A Mortised Transfacet Bone Block for Lumbosacral Fusion. *Journal of Bone and Joint Surgery*, **31-A**: 385-393, April, 1949.
17. Shorbe, Howard B., and McBride, Earl D.: A Corvex Saddle Frame. *Journal of Bone and Joint Surgery*, **32-A**: 452-453, April, 1950.
18. Gill, Gerald: Personal Communications.
19. James, Anthony, and Nisbet, Norman W.: Posterior Intervertebral Fusion of the Lumbar Spine. *Journal of Bone and Joint Surgery*, **35-B**: No. 2: 181-187, May, 1953.
20. Schlesinger, Edward B.: Use of Muscle Relaxants as Aid in Diagnosis and Treatment. *Journal of Bone and Joint Surgery*, **33-A**: No. 2: 480, April, 1951.
21. Galluccio, A. C.: Spondylolisthesis, A General Consideration with Emphasis on Radiological Aspects. *Radiology*, **42**: No. 2, 158, February, 1944.
22. Williams, Paul C.: The Conservative Management of Lesions of the Lumbosacral Spine. Instructional Course Lectures American Academy of Orthopaedic Surgeons, **10**: 90-191, 1953.

2222 Monument Ave.

## SOME SKIN MANIFESTATIONS OF INTERNAL DISORDERS\*

EDWIN E. BARKSDALE, M.D.,†

Yater Clinic, Washington, D. C.

COMMANDER JOHN D. WALTERS, (MC) USN,

U. S. Naval Hospital,

Bethesda, Maryland,

and

LIEUTENANT ARTHUR B. KERN, (MC) USNR,

U. S. Naval Hospital,

Bethesda, Maryland

## INTRODUCTION

The purpose of this paper is to illustrate the fact that there are many conditions involving internal organs that show various manifestations on the skin.

In discussing this subject I cannot help but recall the teachings of Dr. Dudley C. Smith, now deceased. I well remember his expressions of disgust when someone would tell him that his job was easy because his patients would never die and would never get well. There was another old expression which used to annoy him, namely, that if sulphur or mercury could not cure a skin condition, it could not be cured. His comeback was always with this statement—"Dermatology is a study of those diseases which involve the skin and its contents." The skin is not only a vital organ, but it is the largest organ in the body. Its weight is approximately three times that of the liver. Just as with any vital organ, if a certain percentage of it is destroyed by either injury or disease, one cannot exist.

## SKIN MANIFESTATIONS IN DIABETES

Diabetes mellitus\*\* is one of the systemic diseases which is commonly accompanied by cutaneous manifestations. Whereas most of the disorders associated with diabetes are not specific for that condition, they are more common in diabetics than they are in non-diabetics. Not infrequently the dermatosis is the presenting symptom of the diabetes.

The disorders of the skin associated with diabetes are listed in Table I. They include infections—bacterial and fungus—pruritus, xanthochromia, necrobiosis lipoidica, xanthoma diabetorum, gangrene and Dupuytren's contracture.

†Consultant in Dermatology, U. S. Naval Hospital, Bethesda, Maryland.

\*Read before the annual meeting of The Medical Society of Virginia, at Roanoke, October 18-21, 1953.

\*\*A. B. Kern, M.D.: "Cutaneous Manifestations of Diabetes Mellitus", Rhode Island Med. J., **36**: 198, April, 1953.

TABLE I

## CUTANEOUS MANIFESTATIONS OF DIABETES MELLITUS

- I. Infections
  - A. Bacterial
  - B. Fungus
- II. Pruritus
- III. Xanthochromia
- IV. Necrobiosis Lipoidica Diabetorum
- V. Xanthoma Diabeticorum
- VI. Gangrene
- VII. Dupuytren's Contracture

In Table II are listed the various bacterial infections of the skin which may be secondary to dia-

TABLE II

## CUTANEOUS MANIFESTATIONS OF DIABETES MELLITUS

- I. Infections:
  - A. Bacterial
    1. Furuncles
    2. Carbuncles
    3. Erysipelas
    4. Erythema
    5. Paronychia
    6. Hidradenitis Suppurativa

betes. Greenwood studied the skin of 500 diabetic patients and found an incidence of furuncles and carbuncles in seven per cent. Pyogenic infection for the diabetic presents a serious problem and early and thorough care is imperative.

Fungus infections are common in the diabetic, as is illustrated in Table III. However, there is such

TABLE III

## CUTANEOUS MANIFESTATIONS OF DIABETES MELLITUS

- I. Infections:
  - B. Fungus
    1. Dermatophytosis
    2. Moniliasis
      - (a) Paronychia
      - (b) Erosio Interdigitale Blastomycetica
      - (c) Perleche
      - (d) Vulvovaginitis
      - (e) Balanitis
      - (f) Intertriginous Dermatitis



variation in the reported incidences for dermatophytosis in normal control groups that it is difficult to state whether the incidence in diabetics is actually greater than in non-diabetics. The importance of fungus infections of the feet bears stressing. The erosion and fissuring produced supplies a portal of entry for bacteria, with the possibility of resultant osteomyelitis or gangrene.

Moniliasis, a fungus infection due to the yeast *Candida albicans*, is frequently associated with diabetes.

Itching is perhaps the most common cutaneous symptom of diabetes. It is present in at least 25 per cent of cases. Itching may be generalized, but more often is localized as pruritus ani, vulvae or scroti. The skin of such patients usually shows just scratch marks, although in cases of long standing there may, in addition, be lichenification or thickening.

Xanthochromia is a yellowish discoloration of the skin, particularly noticeable on palms, soles and nasolabial folds. It is found in about nine per cent of diabetics and is due to disturbance in the ability to metabolize carotene.

Necrobiosis lipoidica diabetorum is characterized by yellow to red, round, oval or irregular, sclerotic plaques with glazed surfaces. Lesions may be single or multiple, occur predominantly in females, with the extremities, particularly the lower ones as the usual sites. There is no specific therapy for this condition. Control of the diabetes does not bring about a return of the skin to normal.

Xanthoma diabetorum is characterized by the sudden appearance of multiple, frequently pruritic, small yellow to brown papules and nodules which may remain discrete or become confluent. There is predominant involvement of the extensor surfaces of the extremities and the buttocks. The condition tends to occur in severe diabetics and is the result of increased blood total lipid and cholesterol. On a diabetic diet and insulin there is prompt involution of the lesions.

Gangrene is primarily a surgical rather than dermatologic problem. We wish now to simply point out that such gangrene is by no means limited to the lower extremities. In recent years there have been reports of its occurrence on the upper extremities, nose, orbit, tongue, face, vulva and glans penis.

In regard to Dupuytren's contracture, we wish to state only that a greater frequency has been noted among diabetics.

Finally, it should be pointed out that a routine urinalysis is not sufficient to rule out diabetes. A fasting blood sugar will not always detect mild diabetes. It is our routine to do a one hour p.c. blood sugar. Anything over 150 mg.% is indicative of a glucose tolerance test. It is to be noted that we have listed 19 skin conditions in which diabetes must be ruled out.

#### SKIN MANIFESTATIONS OF CARCINOMA

Except for those carcinomas arising primarily in the skin, the lesions in the skin are not clinically diagnostic. A metastases to the skin from an internal organ can only be definitely diagnosed by pathological study. This will not only usually disclose the type of malignancy, but will often disclose the site of its origin.

TABLE IV  
METASTATIC CARCINOMA

- I. Metastases Reach Skin by:
  1. Direct Spread from Underlying Tumors, Such As Direct Extension Through Abdominal Wall from Carcinoma of Gall Bladder
  2. Direct Spread Through Lymphatics, e.g., Carcinoma *En Cuirasse*
  3. Dissemination Through Lymphatics
  4. Dissemination Through Blood Stream
- II. Sites of Origin for Cutaneous Metastases
 

Breast	— 50%
Stomach	— 15-31%
Lung	— 12%
Uterus	— 9%
Kidney	— 9%
- III. Other Features:
  1. Cutaneous Metastases Relatively Rare, with Incidence Varying from 1 to 2.7 per cent
  2. Metastases Generally Confined to Region of Primary Growth, e.g., Carcinoma of Pelvic Organs When Metastasizing to Skin Usually Does So to Skin of Groin, Perianal and Pelvic Regions
  3. Some Tumors Have Predilection for Scalp, Namely 33 per cent of Carcinomas of Breast and 20 per cent of Others
  4. Cutaneous Metastasis Has No Characteristic Clinical Appearance, Except in Cases of Carcinoma *en Cuirasse*. Usually Appear As Discrete, Asymptomatic Nodules.
  5. Histopathology Generally Approximates That of the Primary Growth
  6. Cutaneous Metastases Are Generally Indicative of Progression and Early Fatal Termination.

Table IV illustrates the routes by which underlying tumors reach the skin and shows the internal organs which more frequently metastasize to the skin, namely, the breasts, stomach, uterus and kidneys.

Table IV likewise illustrates some other features of metastatic carcinoma.

Lymphoblastoma includes the following diseases which are characterized by proliferation of lymphatic or reticuloendothelial tissue in the skin as well as in other organs of body:

- I. Mycosis Fungoides
- II. Leukemia Cutis
- III. Hodgkin's Disease
- IV. Lymphosarcoma

Table V illustrates some of the cutaneous manifestations of the diseases.

TABLE V

*Cutaneous Manifestations:*

- A. Specific or True Neoplastic Infiltrations
- B. Non-Specific or Toxic Reactions
  1. Pruritus
  2. Eczematoid, Psoriasiform, Urticarial, Erythema Multiforme-Like, Bullous and Pemphigoid Lesions
  3. Purpuric and Hemorrhagic Lesions
  4. Herpes Zoster and Herpes Simplex
  5. Exfoliative Dermatitis
  6. Stomatitis
  7. Pigmentation
  8. Elephantiasis
  9. Alopecia

#### MYCOSIS FUNGOIDES

This term was applied to a disease which is primarily cutaneous because of the presence of mushroom-like tumors. The term is inaccurate, as pruritus and erythematous, scaling macules may exist for years before other manifestations appear. These are, the premycotic eczematoid stage, as infiltrative stage and the tumor stage. The condition may also first appear as an exfoliative dermatitis or may follow psoriasis-like conditions. Diversity of presenting stages is frequent, as any stage may be the first to become manifested. The tumor stage, whenever it appears, represents the terminal picture. The tumors may be pedunculated, flat, oval, round or of any configuration, and may be red to bluish-red in color. They tend to break down early and form deep ulcers with necrotic bases. Bullous types and alopecia have been described. While the disease is usually limited to the skin, any organ may be in-

volved and the lymph nodes are enlarged either locally or generally. Victims of this disease usually survive about 5 years without treatment, but have been known to live for many years under proper therapy.

#### LEUKEMIA CUTIS

This condition is usually a manifestation of primary hematopoietic disease, but the skin lesions may appear before the blood changes become evident. Skin involvement may follow all three types of leukemia—lymphatic, myelogenous, and monocytic—and are seen in the acute, chronic or aleukemic phases of the disease. Lymphomatous nodules and tumors appear in the skin, subcutaneous tissues, and mucous membranes. Petechial and diffuse hemorrhages, ulcerations, urticaria, generalized herpes zoster, herpes simplex, exfoliative dermatitis, erythroderma and severe pruritus may be present at one time or another. When the skin is the first of the organs to manifest the disease, general dissemination may not follow for months or years. The most frequent location of these bluish-red or plum-colored nodules or tumors or infiltrations is on the face, then the extensor surface of the extremities, the breasts and the shoulders.

#### HODGKIN'S DISEASE

The most prevalent cutaneous manifestation of this disease is pruritus and excoriations. Urticaria, icterus, scarlatiniform eruptions, alopecia and hemorrhages may be seen. Migratory generalized herpes zoster is more frequent with Hodgkin's disease than with any of the other lymphoblastomas. Skin lesions may precede or accompany the characteristic lymph node enlargement.

#### LYMPHOSARCOMA CUTIS

This rare condition results from metastases from disease in other organs. It is mentioned only to complete the classification.

While pointing out that varied skin lesions accompany or precede nearly all of the above primary diseases, emphasis must be placed on the fact that such manifestations are not diagnostic in themselves. The final diagnosis must rest on the peripheral blood picture, bone marrow studies and skin biopsies.

#### SKIN REACTIONS FROM DRUGS USED IN TREATING INTERNAL DISORDERS

Penicillin and the antibiotics cause by far the greater number of skin reactions at the present time.

This is in a large measure due to their wholesale use. Most of the reactions on the skin from the antibiotics belong in the urticaria group. However, this may grade itself from the urticaria reaction into the group of erythema multiforme and even purpura.

In Table VI is listed a few of the drugs which have been known to cause definite reactions. However, it should be pointed out that one may become sensitive to any drug.

TABLE VI

## REACTIONS FROM DRUGS USED IN INTERNAL DISORDERS

1. Penicillin and the Antibiotics
2. Bromides, Iodides
3. Barbiturates
4. Thiopottassium Cyanate in High Blood Pressure
5. Atabrine and Gold
6. Butazolidin
7. Any Drug

## METABOLIC AND ENDOCRINE DISORDERS

This, of course, covers a wide variety of conditions but we will only discuss those as listed in Table VII. We mention impetigo herpetiformis (Table VIII) only because we have seen two cases. It is an extremely rare condition fortunately.

TABLE VII

## METABOLIC AND ENDOCRINE DISORDERS

- I. Impetigo Herpetiformis
- II. Acne (Cystic)
- III. Psoriasis

TABLE VIII

- I. Impetigo Herpetiformis
  - A. An Eruption During the Menstrual Period
  - B. No Eruption During Pregnancy
  - C. No Eruption During Suppression of Menses
  - D. Cure Following Castration

Unfortunately, the average physician does not pay sufficient attention to the adolescent child with acne. It is a widespread opinion at the present time among parents that acne should not be bothered with because it will get well anyway. This is often true, but not necessarily. It should be realized that the important thing is that we are dealing with young boys and girls who become very sensitive about their appearance. This frequently leads them into a series of vague complaints of various internal organs which often goes into a neurotic state.

As shown in Table IX, acne can be very easily controlled on a simple routine which can be carried out by any physician. It is important to note that X-ray therapy is not a part of our procedure. It is

TABLE IX

- II. Acne
  - A. Diet
  - B. Ultra Violet Ray
  - C. Vitamin A (Aquasol)
  - D. Kutapressin
- III. Psoriasis
  - A. Kutapressin

thought that once the cooperation of child and parents can be obtained that definite improvement will occur in 100% of the cases of acne, and particularly cystic acne. Our diet routine consists mainly of eliminating chocolate, its derivatives and excess fatty foods. We have been using Kutapressin, which is a valuable adjunct to acne therapy. We do not know too much about this drug except that it is made from liver extract and is a cutaneous vaso constrictor. We have seen no untoward reactions from it. Our usual dose is 2 cc. subcutaneously one to three times a week. Just as insulin in diabetes, Kutapressin is not a cure, but a control. Just as a diabetic is taught to give himself insulin, we have been able to teach either the parent or child to administer the Kutapressin.

We have recently been doing some investigative work on the use of this drug in psoriasis. From our preliminary studies it is our opinion that it is a valuable aid in control, but we have had no cures. We have now treated 27 cases by administering 2 cc. three times at week over a period of three months. Two of these cases have been women in which the drug was a definite failure. Both of these women were under considerable mental stress and strain. There has been one failure in a man. However, he was taught to give himself the drug and there is some question in our minds as to whether he went through the entire experiment. The other cases have had so much improvement that they refuse to discontinue the drug.

## SUMMARY

A negative test for sugar in the urine and fasting blood will not rule out diabetes.

Parents and doctors in general do not put sufficient emphasis on the management of acne. There is too much of an attitude of "Oh well, you'll outgrow it."

Kutapressin, which is a cutaneous vaso-constrictor, is of definite value in psoriasis; although no cures have been obtained, it does three things—(1) it causes the scales to disappear; (2) it stops itching;



and (3) it prevents the formation of new lesions.

The cutaneous lesions produced from lymphoma and mastitis carcinoma are not diagnostic except by pathology.

#### DISCUSSION

DR. J. W. LOVE, Alexandria: It is gratifying to know that the purpose of Dr. Barksdale's paper is to illustrate the dermal manifestations of diseases involving the internal organs, and he has ably presented this subject. The four disorders which he has mainly discussed, diabetes, the malignancies, and metabolic and drug disorders almost cover this field. The various skin manifestations of diabetes, namely, pruritus, furuncles and carbuncles, fungus infections, xanthoma and necrobiosis lipoidica, he has brought out. I might add that necrobiosis is a form of localized diabetic gangrene. Other dermal manifestations of this disorder are seen in lipodystrophia following the injection of insulin, and an occasional case of avitaminosis.

I wish to mention a few of the other dermal manifestations of some generalized disorders. There is fairly frequently a generalized pruritus prior to the erythroderma of leukemia and this can be noted if kept in mind. Everyone, of course, recognizes the pigmentary disorders occurring in pellagra. It has been noted that occasionally a vesicular eruption occurs in the palms in brucellosis.

It is interesting to note that according to Moore a significant number of cases of false positive serological tests for syphilis later develop lupus erythematosus. A fair number of cases of endocarditis develop petechiae, as also bluish spots and splinter hemorrhages in the nail beds.

*Mycosis fungoides* frequently presents bazaar examples, namely, eczematous eruptions, whorls, plaques, etc., and, although these skin manifestations may be cleared by X-ray, they will return, for it is a generalized and uniformly fatal disease.

*Periarteritis nodosa* has as its most characteristic skin manifestation crops of pea to walnut-size nodules located in the subcutaneous tissue, which are painless and non-itching, and these occur in 25% of the cases according to Ketron.

*Herpes gestationalis* is a form of dermatitis herpetiformis which occurs in pregnancy and is thought to be of endocrine origin. Two other disorders of generalized nature, namely, *Felty's syndrome* and *sarcoidosis*, have dermal manifestations. The former is felt to be adult Still's disease with a chronic deforming arthritis, splenomegaly, leukopenia, lymphadenopathy and frequently a yellowish tint to the skin. Sarcoidosis involves the skin, the eye, the lungs and the bones. The nodules frequently appear on the cheek. They do not break down or involute and tend to spread in a raised ring at the margin.

*Haemochromatosis* shows a pigmentation similar to that in Addison's disease except the mucous membranes are not involved. *Infectious mononucleosis* has fairly frequently a fifth-day roseola—a maculo-papular eruption which is not pruritic.

*Chronic discoid erythematosus*, which is a generalized disease involving the kidneys, vascular tissues, and skin, occasionally shows a very interesting manifestation other than the butterfly lesions of the cheek, namely, a bluish-red discoloration of the lips which is covered with fine silvery scales, the so-called "peeling cellodian" lips.

It should be noted that the lesions of the soles and palms occurring in *gonorrhea*, namely, keratosis blennorrhagica have disappeared apparently due to the use of penicillin.

Finally, I should like to add that our results with Kutapressin in acne and psoriasis have not been consistent. Some cases responded very well and others have failed entirely, but I feel this drug may be a useful adjunct in some disorders.

---

### Assembly Exhibits

It becomes more apparent every day that the First Interstate Scientific Assembly (Annual Meeting), to be held in Washington, October 31-November 3, will be a record shattering event. For example, the Assembly will attract 85 commercial and 40 scientific exhibits—an all-time high.

Be sure to visit these exhibits—not once but several times. You will find them most worthwhile.

## TUMORS OF THE SALIVARY GLANDS

### A Clinicopathologic Study of 100 Cases

JOHN L. THORNTON, M.D.,  
GORDON R. HENNIGAR, M.D.,

and

SAUL KAY, M.D.,

Departments of Pathologic Anatomy and Surgical Pathology, Medical College of Virginia,  
Richmond, Virginia.

In the past twelve years, a number of excellent studies on tumors of the salivary glands with particular reference to correlation of the clinical with the pathological features have appeared in the literature.<sup>1,2,3,4,5,6,7,8,9</sup> The most recent thorough investigation along this line is that of Rawson, Howard, Royster, and Horn.<sup>6</sup> During the last decade special attention has been given to some of the more rarely encountered types of tumors, namely, papillary cystadenoma, adenolymphoma, mucoepidermoid tumor, and hypernephroid or acinic cell tumor. The classification of tumors of the salivary glands, like most classifications of disease states, has not reached the point of general agreement. The classification used in this report is similar to that of Bauer and Bauer<sup>10</sup> (see Table 1). As the mixed tumor of the salivary gland constitutes the most frequently encountered type, it would seem especially important to determine the frequency of the development of malignancy in this tumor and compare the course of the disease with those cases which have carcinoma at the onset. Recurrence rates will often vary with different series and may depend, at last somewhat, on the type of operative procedure employed at the center from which the report emanates. It seems almost compulsory that a follow-up be established in order to properly evaluate the behavior of these neoplasms. As many of the tumors, particularly mixed tumors, are slow growing and bring the patient to the physician two to twenty years after the onset, in addition to the fact that recurrences appear one to twenty years after operation, long term observation of such patients is extremely difficult. Hence, a report dealing with this follow-up data would seem to be justifiably recorded alongside similar analyses from other medical centers. Of the one hundred clinical records studied in this communication, we have adequate follow-up material on forty-six patients. The purpose of this report, then, is to: (1) set forth

our classification, (2) clinically and morphologically characterize the various tumors, and (3) state the recurrence rates of these tumors.

#### MIXED TUMOR

Sixty-five mixed tumors were studied and this incidence of two-thirds of all neoplasms in all of the sites where salivary-gland-type tumors occur is in agreement with the series of Rawson, Howard, Royster, and Horn<sup>6</sup>. Various published reports place the incidence from sixty to seventy-five per cent. The parotid gland is the commonest site for the development of the mixed tumor (Table 1). Fifty of the sixty-five tumors occurred in the female sex. The average age of onset was thirty-six years. The youngest patient was nine and the oldest seventy-two years of age. The average duration of the tumor before seeking medical advice was four years and the commonest complaint was a gradually growing painless nodule or enlargement of the gland. Pain occurred in only two cases and this was late in the course of the disease.

Grossly, the tumors varied in size with an average of 4x3x2 cm. Encapsulation and lobulation were constant features. On section they presented a white to grey color with a firm consistency. No hemorrhage, cyst formation or calcification was seen in the smaller tumors. Microscopically these tumors were characterized by their pleomorphism. The one constant finding was that of the well formed duct. These ducts contain two layers of cells (Fig. 1). The inner layer is of epithelial origin and the outer layer is thought by some to be of myoepithelial origin, although others hold them to be basal epithelial cells. Either or both of these cell layers may predominate. The stroma of these tumors varies greatly even in the same tumor. It may be highly cellular and spindly, loose and myxomatous, hyalinized, or contain cartilage and, rarely, even bone. Squamous and sebaceous gland metaplasia were seen in the epithelial elements. Islands of onkocytes were oc-

\*Read at the annual meeting of The Medical Society of Virginia in Roanoke, October 18-21, 1953.

TABLE 1

Tumor	Total		Sub-	Sub-	Palate	Lip	Mouth	Tongue
Benign			Parotid	maxillary	lingual			
Mixed tumor -----	65	53	4	0	6	1	1	0
Acinic cell adenoma -----	0	0	0	0	0	0	0	0
Papillary cystadenoma -----	1	1	0	0	0	0	0	0
Papillary cystadenoma								
lymphomatosum -----	4	4	0	0	0	0	0	0
Adenolymphoma -----	2	2	0	0	0	0	0	0
Onkocytic adenoma -----	2	1	0	0	1	0	0	0
	—	—	—	—	—	—	—	—
Total -----	74	61	4	0	7	1	1	0
Malignant								
Adenocarcinoma								
—differentiated -----	13	6	4	1	1	0	0	1
—undifferentiated -----	4	3	1	0	0	0	0	0
—cylindroma type -----	5	2	2	0	1	0	0	0
Papillary cystadeno-carcinoma -----	1	1	0	0	0	0	0	0
Mucoepidermoid tumor -----	2	1	0	0	1	0	0	0
Acinic cell carcinoma -----	1	1	0	0	0	0	0	0
	—	—	—	—	—	—	—	—
Total -----	26	14	7	1	3	0	0	1
	—	—	—	—	—	—	—	—
TOTAL -----	100	75	11	1	10	1	1	1

casionally found. The histologic picture of the tumor seemed to have no bearing on the clinical course. Reappearance of the tumor after excision occurred in four cases. All could be laid to inadequate initial excision. One tumor recurred three times. In all instances the recurrence had an identical histologic picture to that of the original tumor. Carcinoma was found to develop in two

mixed tumors. Both of these instances were in tumors of longstanding asymptomatic duration which suddenly began to grow rapidly. Histologically they were characterized by a picture of undifferentiated carcinoma with scattered regions of what appeared to be mixed tumor.

PAPILLARY CYSTADENOMA

This is a rare benign salivary gland tumor of which we had two examples. It tends to be multiple. Grossly, it is encapsulated and cystic. Microscopically it is composed of vascular stalks, lined by columnar epithelium and mucus secreting cells, and projecting into cystic spaces. There is a marked tendency to recurrence and each recurrence is histologically less differentiated than its predecessors. Development of papillary cystadenocarcinoma is all too frequent. We had one such case in this series.

ACINIC CELL ADENOMA

We had no examples of this very rare tumor, as described by Godwin and Colvin<sup>11</sup>. The tumor is composed of clear cells in acinar arrangement and without the presence of ducts. It is presumed to have its origin in the secretory acini of the glands.

PAPILLARY CYSTADENOMA LYMPHOMATOSUM

This tumor, frequently designated Warthin's tumor, has received much attention in the recent literature.

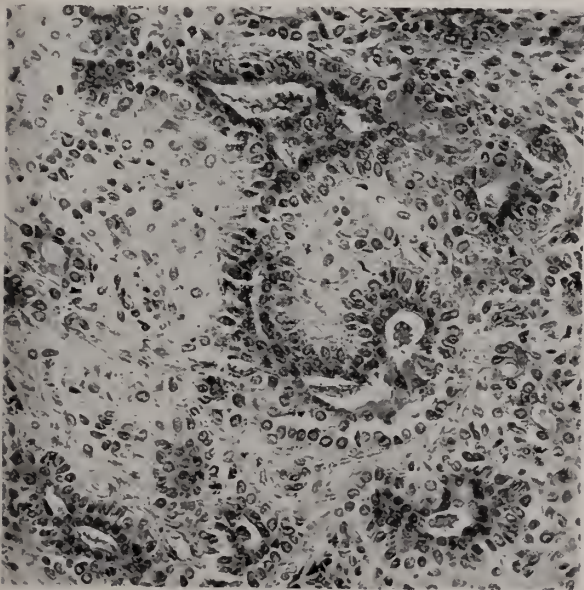


Fig. 1. Mixed Tumor. Note the well-formed ducts with two cell layers and the loose myxomatous stroma. X200



It is the present consensus of opinion that it has its origin in the salivary gland ducts and that the dense lymphocytic stroma comes from the parotid lymphoid stroma. All of our four cases were in males and all were in the superficial lobe of the parotid. One case was bilateral and one was multicentric in the same lobe. Grossly they were characterized by their encapsulation and cystic structure on cross section. Microscopically a very typical picture presents (Fig. 2). There are papillary projections into cystic spaces.

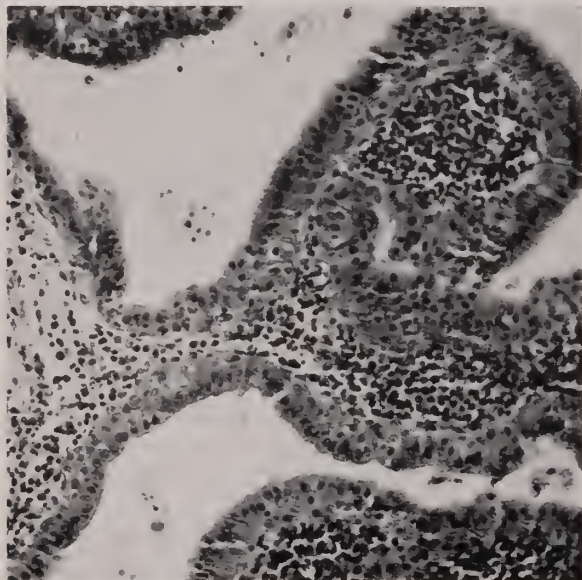


Fig. 2. Papillary Cystadenoma Lymphomatosum. Papillary processes covered by tall columnar cells projecting into cystic spaces. Dense lymphocytic stroma. X 200

These projections are lined by tall eosinophilic columnar epithelium and there is a dense lymphocytic stroma with an occasional germinal center.

#### ADENOLYMPHOMA

We had two examples of this rare, benign tumor which is recently being recognized with increasing frequency<sup>10</sup>. These tumors are regarded as benign. They are well encapsulated. Histologically they are identical to Mikulicz's disease<sup>12</sup>. There is proliferation of ductal cells and a dense lymphocytic stroma. Sebaceous gland metaplasia was noted in one of our cases (Fig. 3).

#### ONKOCTIC ADENOMA

Onkocytes, large cells with eosinophilic granular cytoplasm, are found in the salivary glands of many elderly people.<sup>13</sup> We found nests of these cells in two of our mixed tumors. In addition, we had two well circumscribed tumors composed entirely of these cells. Malignant change has been described.

#### CARCINOMA

We have subdivided carcinoma of the salivary glands into the following classifications; adenocarcinoma, differentiated, undifferentiated, and cylindroma types; papillary cystadenocarcinoma; mucoepidermoid tumor; and acinic cell carcinoma. Twenty-six of our one hundred cases were diagnosed as malignant. This means that one out of four salivary gland tumors will behave in a malignant fashion. This coincides with the study of Rawson, Howard,

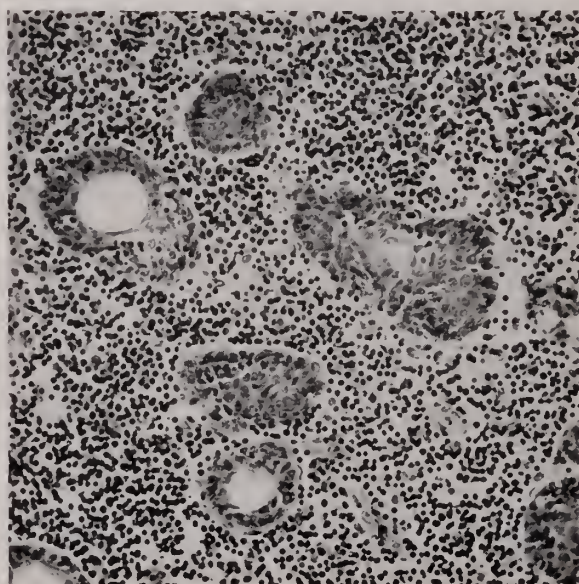


Fig. 3. Adenolymphoma. Dense lymphocytic stroma containing nests of proliferating ducts. X 200.

Royster, and Horn<sup>6</sup>, in which 44 out of 152 tumors were malignant but is somewhat greater than the figures of Bauer and Bauer,<sup>10</sup> in whose series only 17 out of 143 tumors were considered to be malignant. On the whole, the malignant tumors occurred in older individuals, the average age being 52 years, and were of shorter duration, the average being 2 years. Rapid growth was noted in 12 cases and pain was a prominent feature of 6. Predilection for the parotid gland was not so prominent as in the case of the mixed tumor. Fourteen of the twenty-six malignant tumors were found in the parotid gland. Grossly, the tumors were characterized by their lack of encapsulation, firmness, and infiltrative nature. Gross involvement of the facial nerve was noted in 6 of the 14 parotid tumors and facial paralysis was present in 2. The distinguishing features of our various classifications of salivary gland carcinoma will be considered individually.

### ADENOCARCINOMA

Twenty-two of our twenty-six malignant tumors were classified as adenocarcinoma. Four were undifferentiated and 13 were in various degrees of differentiation. Five were of the cylindroma type.

*Differentiated:* These tumors were composed of malignant epithelial cells with a tendency to form ducts. Mucus secretion was observed in the more differentiated tumors. Local invasion was a feature of eight cases. Two metastasized to regional lymph nodes and metastases were noted to the brain in one and to the lungs in two. Recurrence has been found in six out of seven cases with adequate follow-up. Six patients have died of their tumor.

*Undifferentiated:* These tumors are characterized by sheets of undifferentiated cells with numerous and prominent mitotic figures (Fig. 4). Usually regions

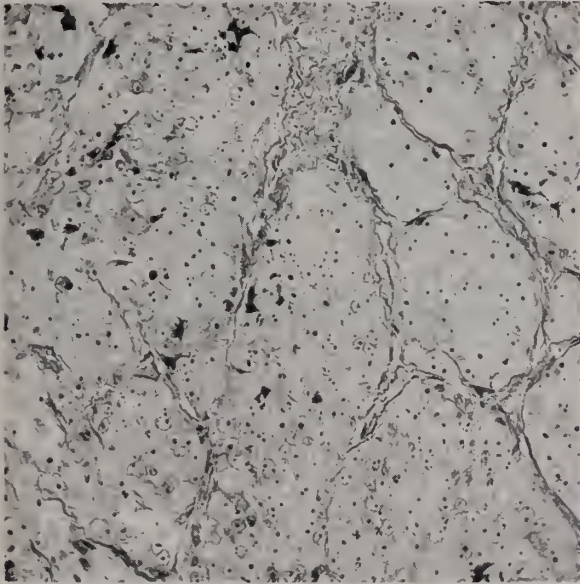


Fig. 4. Undifferentiated Carcinoma. Sheets of undifferentiated tumor cells in alveolar pattern. X200

of more differentiated adenocarcinoma can be found coexisting. Two cases can be shown to have arisen in pre-existing mixed tumor. This corresponds to the usual quotation of malignancy developing in two per cent of mixed tumors.<sup>6</sup> Recurrence has been noted in two out of three cases adequately followed. Metastases were to the regional nodes in one case and to the skull in one case. Tumor death has occurred in two patients.

*Cylindroma:* This distinctive tumor is composed of cylindroid cords of cells containing a basophilic mucoïd material. They have a strong tendency to invade the perineural lymphatics (Fig. 5) and pain

is frequently an early symptom. This could be demonstrated histologically in three of our five cases. Two out of three adequately followed cases have shown recurrence. Local invasion was noted in one case and one patient died with metastases to the lung and kidney. This tumor has shown a moderate degree of radiosensitivity.<sup>14</sup> This is a sharp contrast to the other forms of adenocarcinoma which are quite radio-resistant.

### PAPILLARY CYSTADENOCARCINOMA

Papillary cystadenocarcinoma is the malignant variant of papillary cystadenoma. The histologic picture shows considerable similarity with the exception of the obvious malignant character of the epithelial cells lining the papillary projections. The tumor is locally invasive. Our one case was origin-

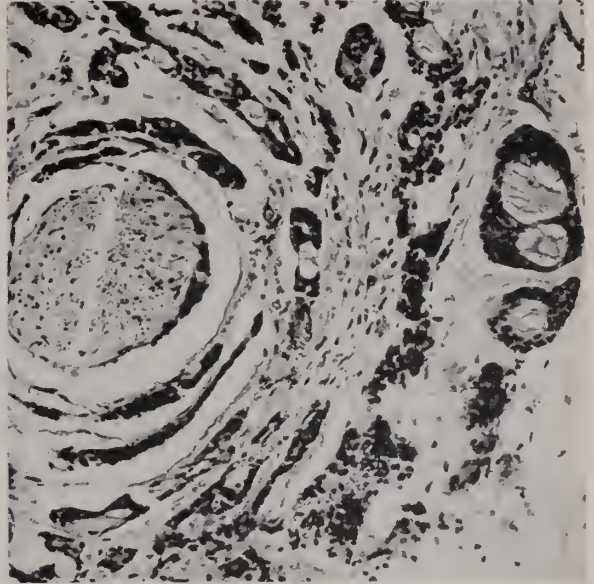


Fig. 5. Adenocarcinoma, Cylindroma Type. Note the cylindroid pattern, stringy mucus, and invasion of perineural lymphatics. X200

ally diagnosed as a benign papillary cystadenoma. The tumor recurred four times. Each recurrence was characterized by a more malignant histologic picture (Fig. 6). At the last operation there was invasion deep behind the mandible. No metastases were found. The tumor is moderately radiosensitive but not radio-curative.<sup>9</sup>

### ACINIC CELL CARCINOMA

The malignant variant of acinic cell adenoma, the acinic cell carcinoma, is an extremely rare form of salivary gland cancer. Grossly, it is hard and infiltrative. Microscopically, it is characterized by



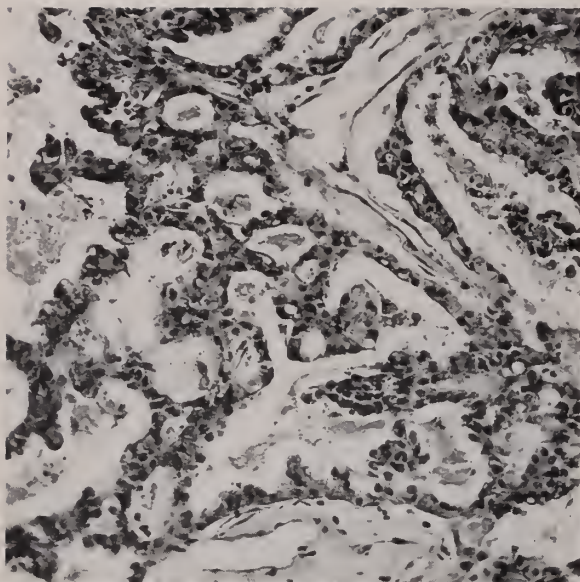


Fig. 6. Papillary Cystadenocarcinoma. Vascular papillary processes of malignant epithelial cells projecting into cystic spaces. X 200.

pale staining secretory epithelial cells with marked resemblance to the cell of the salivary gland acini (Fig. 7). These cells tend to form an acinic pat-

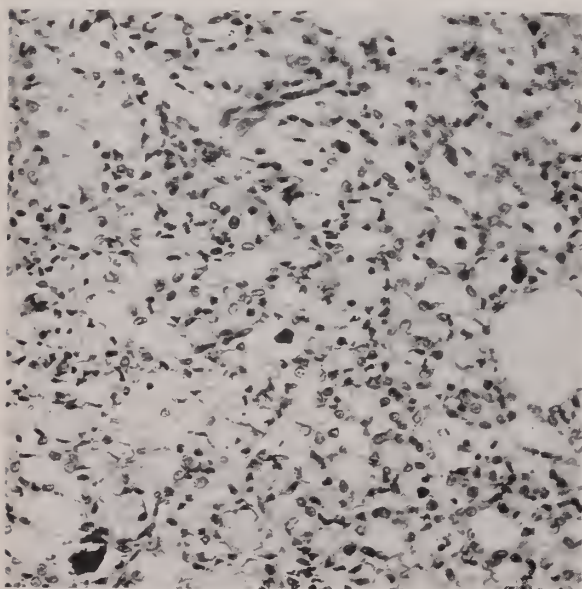


Fig. 7. Acinic Cell Carcinoma. Malignant secretory epithelial cells tending to form acinic pattern. Note the absence of ducts. X200

tern. No ducts are seen. In our one case, at the time of original operation there was invasion of the facial nerve. Reappearance of the tumor was noted two years later and metastases appeared in the regional lymph nodes.

### MUCOEPIDERMOID TUMOR

Stewart, Foote, and Becker described the mucoepidermoid tumor as comprising ten per cent of all salivary gland tumors.<sup>15</sup> We had two cases in our series. Although benign forms have been described, both of the cases in this study are regarded as malignant. Local recurrences were noted in both cases and one patient has died. The tumors are characterized by sheets of malignant epidermoid cells imbedded in which are many large pale staining mucus-producing cells (Fig. 8).

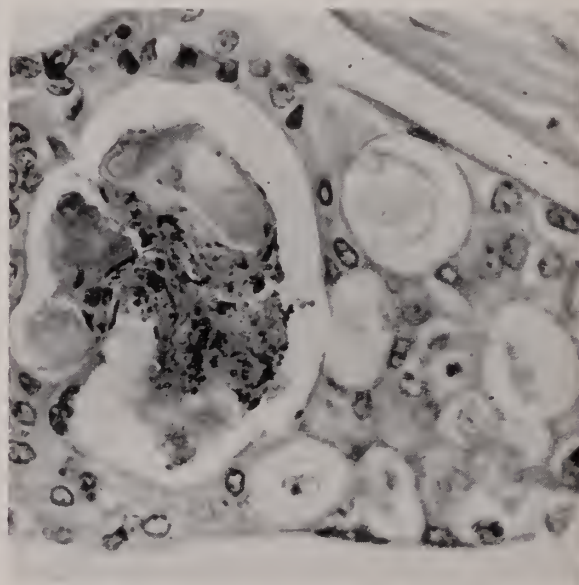


Fig. 8. Mucoepidermoid Carcinoma. Tumor composed of malignant epidermoid cells intermixed with large, clear, mucus-secreting cells. The necrotic keratin is evident. X400.

### THERAPY

We feel very strongly that, as in the breast and thyroid, any solitary nodule in a salivary gland deserves biopsy and histologic study. In the case of smaller nodules where technical difficulties are not encountered, this biopsy should be excisional in nature. Since the majority of salivary gland tumors are radio-resistant, and since radiation distorts the histologic picture and makes surgery technically more difficult, the tumors should not be given radiotherapy prior to establishing a diagnosis. If the tumor is benign it should be excised together with a rim of normal tissue. If it is malignant a radical excision of the gland must be done. Fear of injury to the facial nerve should not deter surgery since, if the lesion is benign, it frequently can be removed without serious damage to the nerve, and, if it is malignant, it will invade and destroy the nerve and



eventually kill the patient. If the nerve must be sacrificed, plastic procedures and nerve anastomoses have proved quite successful.

#### SUMMARY

1. 100 cases of glandular tumors of the salivary glands have been reviewed and a classification presented.

2. The various classifications of tumors have been characterized clinically and morphologically.

3. Comments on therapy have been made.

#### REFERENCES

1. Singleton, A. O., and Duren, N.: Tumors of the Salivary Glands, *Texas State J. Med.*, **36**: 784, 1941.
2. McFarland, J.: The Histopathologic Prognosis of Salivary Gland Mixed Tumors, *Am. J. Med. Sci.*, **203**: 502, 1942.
3. McFarland, J.: The Mysterious Mixed Tumors of the Salivary Glands, *Surg., Gynec., and Obst.*, **76**: 23, 1943.
4. Robbins, C. F.: Tumors of Salivary Gland Origin, *Surgery*, **14**: 924, 1943.
5. Taylor, G. W., and Garcelon, G. G.: Tumors of Salivary Gland Origin, *New Eng. J. Med.*, **238**: 766 (1948).
6. Rawson, A. J., Howard, J. M., Royster, H. P., and Horn, R. C.: Tumors of the Salivary Glands. A Clinic-Pathologic Study of 160 Cases, *Cancer*, **3**: 445, 1950.
7. Hendrick, J. W., Ward, G. E., and Lacy, M. M.: Salivary Tissue Neoplasms, *Am. J. Surg.*, **81**: 373, 1951.
8. Kirklin, J. W., McDonald, J. R., Harrington, S. W., and New, G. B.: Parotid Tumors—Histopathology, Clinical Behavior, and End Results, *Surg., Gynec. and Obst.*, **92**: 721, 1951.
9. Anderson, R.: Tumors of the Parotid Gland, *Clev. Clin. Quart.*, **19**: 127, 1952.
10. Bauer, W. H., and Bauer, J. D.: Classification of Glandular Tumors of the Salivary Glands—Study of 143 Cases, *A.M.A. Arch. Path.*, **55**: 328, 1953.
11. Godwin, J. T., and Colvin, S. H.: Adenoma of the Parotid Gland, *Arch. Path.*, **46**: 187, 1948.
12. Morgan, W. S., and Castleman, B.: A Clinicopathologic Study of "Mikulicz's" Disease, *Am. J. Path.*, **29**: 471, 1953.
13. Meza-Chavez, L.: Oxyphilic Granular Cell Adenoma of the Parotid Gland (Onkocytoma)—Report of Five Cases and Study of Oxyphilic Granular Cells (Onkocytes) in Normal Parotid Glands, *Am. J. Path.*, **25**: 523, 1949.
14. Quattlebaum, F. W., Dockerty, M. B., and Mayo, C. W.: Adenocarcinoma, Cylindroma Type of the Parotid Gland, *Surg., Gynec., and Obst.*, **82**: 342, 1946.
15. Stewart, F. W., Foote, F. W., and Becker, W. F.: Muco-Epidermoid Tumors of the Salivary Glands, *Ann. Surg.*, **122**: 820, 1945.

#### New Books.

Below are listed new books received at the Tompkins-McCaw Library of the Medical College of Virginia, Richmond. These are available to our readers under usual library rules.

Advances in cancer research, Vol. 2, 1954.

Advances in enzymology, Vol 15, 1954.

Alpers—Clinical neurology, 3rd edition, 1954.

Annual review of medicine, Vol. 5, 1954.

Ciba Foundation—The spinal cord, 1953.

Gollowski—Enzymatic concept of anaphylaxis and allergy, 1953.

Hartman, et al—The dynamics of virus and Rickettsial infections, 1954.

Heath, ed.—Studies in Schizophrenia, 1954.

Lever—Histopathology of the skin, 2nd edition, 1954.

Papanicolaou—Atlas of exfoliative cytology, 1954.

Selman—The fundamentals of x-ray and radium physics, 1954.

Stout—Atlas of Tumor pathology, tumors of the soft tissues, 1953.

Transactions of the American Academy of Ophthalmology and Otolaryngology, 1953.

Yearbook of pathology and clinical pathology, 1953-1954.

## CARDIAC ARREST, REPORT OF A CASE WITH COMPLETE RECOVERY

JOHN E. ALEXANDER, M.D.,\*

Arlington, Virginia  
and

ROBERT L. COULTER, M.D.\*\*

Waterloo, New York

We are reporting this case of actual cardiac arrest observed during the performance of a routine operation for the removal of a pilonidal cyst. It is our feeling that this case is worthwhile reporting because of the excellent result obtained which we feel should be a definite encouragement and a strong argument in favor of rapidity of decision once the diagnosis is established and also to elaborate on the clinical course injecting a note of optimism in the presence of much pessimism proffered by our consultants. In addition we stress the point that reported cases of cardiac arrest with recovery should contain a complete and final survey and evaluation.

While operating on a twenty-three year old, previously healthy, white male for a pilonidal cyst, under spinal anesthesia (10 mgm. pontocaine) in the Buie position, it was noted that the operative wound ceased to bleed and the patient became moderately cyanotic. Examinations established the diagnosis of cardiac arrest. The patient was immediately turned to the supine position and one of us performed a thoracotomy through the fourth intercostal space and instituted cardiac massage while the other simultaneously severed the fourth, fifth and sixth costal cartilages. During this procedure the anesthetist had previously inserted an intratracheal tube and began "bag breathing" the patient. When the rib retractor was inserted it was noted by both of us, by visual inspection and palpation, that the heart was in a state of standstill. One of us continued cardiac massage while the other did a radial artery cut down and began intra-arterial transfusion of whole blood. After about ten minutes from the time the diagnosis was made, a normal cardiac rhythm had been re-established. During this time the patient received approximately 500 cc.s of whole blood and an intravenous cutdown was done on the right lower leg. The patient was then returned to the shock ward.

Upon returning to the shock ward the following were the clinical findings: the patient was completely unconscious; breathing was stertorous and labored; all four extremities were flaccid; and both pupils were widely dilated. Supportive therapy was continued and a tracheotomy carried out, while the intratracheal tube was still in position. It was estimated that spontaneous respiration was established approximately one hour after diagnosis was made. The Cardiologist gave an opinion by clinical examination and electrocardiography that the heart was functioning as though it had not suffered from anoxia and continued to give an excellent cardiovascular prognosis. The Neurosurgeon and Neurologist both concurred in the opinion that there was midbrain damage and that recovery was unlikely and that if recovery did occur the patient would be a "vegetable". The internist consultant added little to our findings except to state that he was, from an overall point of view, optimistic.

The patient was minutely observed by both of us during the entire day and his course was about as follows: during the first twenty-four hour period the patient remained in a comatose state during which time he showed no movement of the extremities or any response to external stimuli. It was noted throughout the course that the patient's blood pressure reached a mean of 190/100 which one of us (JEA) has observed to follow intra-arterial transfusion. The maximum body temperature reached was 104.4°. At the beginning of the next twenty-four hour period he began to show voluntary movements and some response to painful stimuli. At this time it was observed that the patient had no vision.

After a lapse of approximately four hours both of us re-examined the patient and it was noted that the sensorium had improved to the extent that the patient could repeat his own name and recognize his wife by her voice but still could not see. At this time the patient moved all extremities in response to command.

After an interval of approximately three hours

\*Formerly, Chief Surgical Service, Chief Plastic Surgery Section.

\*\*Asst. Chief General Surgery Section, U.S.A.F. Sampson Hospital, A.F.B., N. Y.

more it was noted that, in addition to all other improvements, the patient identified fingers before his eyes. The clinical findings at this time revealed the fact that hypertension persisted; gross hematuria was noted as well as an alkalosis ( $\text{CO}_2$ —7+ vol. %); the temperature was  $100.2^\circ$  (R) and the pulse rate 100. It was noted that the patient voluntarily began to take fluids.

Following the clinical correction of the above mentioned physiologic abnormalities, his body economy returned to normal and he made a very rapid progressive recovery of all motor and sensory modalities.

Two weeks postoperatively subjective examination revealed that the patient was completely oriented. Noteworthy is the fact that the patient experienced a complete amnesia until this time. At the time of final complete evaluation, the patient was found completely normal in every respect and the findings of each consultant and laboratory reports are listed

below. At approximately five (5) weeks postoperative, the electrocardiogram was normal. The EEG was normal. Complete chest x-ray including fluoroscopic revealed slight flattening in the left of the diaphragm and evidence of pleural thickening in the region of the left costophrenic space, otherwise not remarkable. Psychometric test revealed no evidence of deterioration of intellectual function. He was found to be above average intellectually and there was no evidence of a personality change. Medical consultation revealed a normal individual. Eye consultation revealed normal findings. Our personal observation revealed a well healed cicatrix eight (8) inches long at the 4th intercostal space; a well healed pilonidal operative scar; a well healed tracheotomy scar; a re-established radial pulse below the site of the intra-arterial transfusion; and a vigorous, robust young individual, apparently none the worse for the experience.

*3103 Tenth St., N.,*

---

### **Breathing Exercises Aid to Stop Smoking.**

Exercises which teach heavy smokers proper breathing when not smoking may help them stop smoking, according to Dr. William Kaufman, Bridgeport, Conn.

"Many heavy smokers find it impossible to give up smoking for more than a day or so, even though they realize that smoking causes their unpleasant or even alarming cardiovascular and bronchopulmonary symptoms," Dr. Kaufman wrote in the May 22nd Journal of the American Medical Association. "The patient may insist that, despite his tobacco-induced symptoms, the only time he feels emotionally relaxed and comfortable is when he is smoking."

Dr. Kaufman said he found the reason heavy smokers feel uneasy when they try to give up smoking is that they do not breathe properly when they are not smoking. Instead of proper steady, deep breaths, heavy smokers take short breaths when not smoking. This results in an uncomfortable sense of breathlessness and pressure on the chest, and may cause the individual to become uneasy, restless, tense, tired and anxious.

"As a result of these observations, it occurred to me that with breathing exercises, the heavy smoker might learn to breathe normally even when he was not smoking," Dr. Kaufman stated. "This would make it much easier for him to break himself of the tobacco habit.

"I have prescribed breathing exercises in which the patient is taught to breathe out and then in properly 16 times a minute. By practicing these breathing exercises for five minutes eight to ten times a day for a month the patient gradually regains his ability to breathe in a manner that by inspection approximates normal pulmonary ventilation even when not smoking.

"Once a heavy smoker has acquired the habit of breathing properly, he can feel relaxed and comfortable when not smoking. After such preliminary training, 15 heavy smokers (each smoked over 50 cigarettes a day) found it possible to stop smoking without experiencing undue difficulty. Each of these patients had tried repeatedly before to give up smoking permanently, but without success."



## THE CLINICAL USE OF NALLINE ® AS A NARCOTIC ANTAGONIST\*

HAROLD F. CHASE, M.D.,

Professor of Anesthesiology, University of Virginia, School of Medical  
Charlottesville, Virginia.

It is well to call to the attention of all physicians the availability of nalline ®, n-allylnormorphine, as a specific antagonist of the effects of narcotic overdosage. Heretofore, it has been necessary to resort to repeated doses of the pharmacologic stimulants; caffeine, metrazol, or coramine, or to physical stimulus in combating the respiratory and central depressant effects of overdoses of morphine and its relatives. Nalline ® is a drug which every practitioner should have available in his emergency kit, though he may expect to have occasion to use it only infrequently.

The drug is available in ampoules of two ccs. in a concentration of 5 mg./cc. It appears to have a specific competitive blocking action at the site of action of morphine, its derivatives and synthetic analgesic substitutes for morphine. It is effective in increasing the respiratory rate and minute volumes after overdoses of morphine, dilaudid, dromoran ®, demerol ®, methadone ®, or dolophine ®, and nisentyl ®.

In addition to relief of respiratory depression, the fall in blood pressure, decrease in pulse rate, and loss of superficial and deep reflexes resulting from narcotic overdose are alleviated by sufficient doses of Nalline ®. The electroencephalographic tracing is reverted from that of sleep to one of wakefulness.<sup>1</sup>

Two instances from our own experience will serve to illustrate the usefulness of the drug. Mr. F. was a chronic pulmonary invalid for whom 0.5 mgm. of dilaudid was ordered as premedication for closure of a bronchopleural fistula (usual dose 1.5 mgm.) By inadvertance he received 5.0 mgm. at 12 noon, which error was noted immediately. At 1 P. M. his respirations were nine per minute and Cheyne-Stokes in character. He was cyanotic and drowsy. Five minutes after receiving 2.5 mgm. of nalline ® intravenously, respiratory rate increased to 28 per minute and his color improved. Blood pressure which had risen from 100/80 to 140/90 as a result of the respiratory acidosis from diminished ventilatory volume reverted

to normal. Signs of central depression did not recede with this dose.

Three hours later the signs recurred. Two 2.5 mgm. doses of nalline ® given ten minutes apart again reverted respiratory rate and rhythm, color and blood pressure to normal and roused Mr. F. so that he responded to his name.

Twice, at later times, Mr. F. returned for further surgery. On one occasion an average dose of dromoran, 2.5 mgm. given for post-operative pain, produced severe depression in this emaciated invalid. Again 2.5 mgm. of nalline ® intravenously reversed the trend of the respiratory and central nervous system depressive signs after 0.5 gms. of caffeine had had only transient effect. On the third occasion, he was admitted on another service. 100 mgm. of demerol given post-operatively reduced respirations to the point where artificial respiration was required. After two hours of artificial respiration nalline ® was found and 5 mgm. restored spontaneous respirations.

The second illustration is a not uncommon situation which faces doctors in practice. G. W. was a three year old girl who had consumed about one and one half ounces of dolophine ® cough syrup containing 10 mgm. of dolophine (methadon) to the ounce. This quantity was sufficient to make her very sleepy and somewhat ataxic on admission to the outpatient clinic. In the course of the next hour she became increasingly somnolent and was roused with difficulty. 1.25 mgm. of "nalline" given subcutaneously roused her from her lethargy. A second dose was given one half hour later to maintain the effects of the first. Two hours later she was discharged to the care of her mother who reported in the outpatient clinic the next morning that no further depression occurred.

Although early reports showed no effect of n-allylnormorphine as an antidote to depression from barbiturates, ether and other anesthetic agents, a recent report<sup>2</sup> suggests that maximal doses of 40 to 45 mgm. may have a stimulatory effect on the respiratory center depressed by barbiturates. This report sug-

\*Presented before the Albemarle County Medical Society, December 3, 1953.

gests that the drug may have some direct stimulant effect on the depressed respiratory center in addition to its blocking action for morphine and morphine substitutes.

A further use for "nalline" has been found in preventing and treating asphyxia neonatorum<sup>3</sup>—given to the mother in 10 mgm. doses intravenously ten minutes before the anticipated time of delivery, it reduced the incidence of difficult resuscitations. 0.5 to 2.5 mgm. given intramuscularly or into the umbilical vein of the newborn acted as a respiratory stimulant.<sup>4</sup>

Finally it has been shown that in morphine addicts average doses of "nalline" given intravenously will precipitate a train of withdrawal symptoms of yawning, lacrimation, rhinorrhea, goose flesh, restlessness, and gastro-intestinal distress. It is conceivable that this drug might be of use in differentiating the addict malingerer from the true sufferer from gall bladder and renal colic.

In the usual therapeutic doses of from 5 to 40 mgms., "nalline" has been shown to have no effect on the character of respiration or the sensorium of normal individuals. In larger doses in post addicts,<sup>5</sup> it has been shown to produce dysphoria, pseudoptosis, lethargy, mild drowsiness and sweating.

## SUMMARY

There is available now a new and extremely useful therapeutic tool for managing narcotic depressions. "Nalline" is a drug which every doctor should have available for use in emergencies.

## REFERENCES

1. Chase, H. F.; Boyd, R. S.; and Andrews, P. M.: Use of N-allylnormorphine in the Treatment of Overdoses of Dilaudid and Dromoran. *J.A.M.A.* **150**: 1103-1104 (Nov. 15) 1952.
2. Dulfano, M. J.; Mach, F. X.; and Segal, M. S.: Use of N-allylnormorphine in the Treatment of Respiratory Acidosis; *N.E.J.M.* **22**: 248, (May 28), 1953.
3. Eckenhoff, J. E.; Elder, J. D., Jr.; and King, B. D.: N-allylnormorphine in the Treatment of Morphine or Demerol Narcosis; *Am. J. M. Sc.* **223**: 191-197 (Feb.) 1952.
4. Adriani, J.; and Kerr, M.: Clinical Experiences in the Use of N-allylnormorphine (Nalline) as Antagonist to Morphine and Other Narcotics in Surgical Patients; *Surgery*. **33**: 731 (May) 1953.
5. Frasier, H. F.; Wikler, A.; Eisenman, A. J.; and Isbell, H.: Use of N-allylnormorphine in Treatment of Methadone Poisoning in Man. *J.A.M.A.* **148**: 1205-1206 (Apr. 5) 1952.

## Urges Children Be Taught to Be Right-Handed.

Children should be encouraged to be right-handed when they are about one year of age, a medical consultant wrote in the May 22nd Journal of the American Medical Association.

"The infant has no definite sidedness, either left or right; he is ambilateral, not ambidextrous, and both sides are inept," he stated. "A one-sided pattern begins to emerge at about 18 months and continues to develop for many years as one-sided skills are learned.

"Since our culture (customs, tools, etc.) is right-sided, the child should be encouraged to right-sidedness from the very beginning. According to this view, it is wrong to let the child choose for himself, as there is a 50 per cent chance that he may accidentally select the wrong side. However, this en-

couragement must be done patiently and kindly, not forcefully. Otherwise, negativism is excited in the child that may in itself lead to left-handedness and other personality difficulties.

"Similarly, contrariness due to other factors may also express itself in left-handedness. Once the pattern is habituated for certain activities, it becomes more or less ingrained. However, sidedness is not always uniform and mixed laterality for different activities is not uncommon.

"Each introduction of new activities offers an opportunity for right-sided training, especially for significant activities, e.g., writing at the beginning of school. Retraining done kindly and patiently is always possible in children (in school for writing) and even later (as in the war injured), and no ill-effects may be anticipated."

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### Prevention and Treatment of the Asocial and Antisocial Child\*

At the end of the last century, Lombrose's book on the born delinquent made history and impressed psychiatrist, who satisfied with classifying and diagnosing their psychotic patients, would look for physical marks of degeneration. The psychological approach later inaugurated by Bleuler and the psychodynamics introduced by Freud and his disciples, revealed the patient's inner experiences to the student of the psychology of behavior disorders. From now on the road was open to an understanding of the patient's peculiar behavior and its inner motivations, as well as to an insight into the reason why certain apparently insignificant events could arouse what seemed excessive reactions in the mentally or emotionally disturbed. The idea of psychic trauma was reborn. Mental or emotional disturbances, it was found, might not be due necessarily to heredity factors. They might have their source in post-natal events, so overwhelming that they could not be coped with adequately. Early and accumulated hurts or deprivations denying the patient-victim of an opportunity for recuperation between traumatic events have proven to be particularly injurious. With such knowledge in mind, the causes for mental or emotional disturbances were drawn from mysterious darkness into the field of man's action and function. The mentally disturbed, no longer stigmatized and condemned, are now the object of man's enlightened and brotherly understanding.

In spite of the impressive progress made in the understanding of the processes of psychosis and neurosis, in their etiology, and in the methods of treatment and prevention, not all of the psychopathological phenomena were included in the diagnostic classification. Accordingly, these omitted behavior disturbances did not benefit from the advances in treatment, particularly psychotherapy. Even at a period of history when we can no longer think without uneasiness of the time when the mentally sick were burned as sorcerers and witches, we still are in danger of fostering a punitive attitude toward the

delinquent child or adult whom people will frequently dispense with the title of "bad".

Even in hospitals, the so-called psychopath has not always been fully recognized and certain types of delinquent children do not qualify for treatment in the foremost outposts of mental disease prevention, the child guidance clinic. Because of the methods used, child guidance clinics must define a treatable child by three fundamental criteria. First, the child must be able to verbalize or have capacity for oral expression. Second is the ability for transference, namely, his capacity for relating intensely to the treating psychiatrist and reliving his past experiences with and through him. As we see it, the child must be able to invest in his relation to the psychiatrist so profound a trust that, whatever the vicissitudes of this relation, the child will admit to consciousness thoughts which have been unacceptable and too painful for him. The tendency of those undesirable thoughts to plague him and the struggle which is needed to curb them play an important part in the pathognomy of emotional disturbances; thus, the admittance into consciousness is a paramount and consequential effect of treatment. As mentioned, such treatment can proceed only under the condition that the child is able to establish a relevant and dynamic relation to the psychiatrist. The third requirement is the parents' cooperation with the clinic in a number of ways, at times to such an extent as to subject themselves to treatment along with the child. This presupposes responsible parents of some standards, willing to face their own personal problems and to invest a great deal of time for the benefit of the child. The three fundamental criteria are interrelated, the child's ability to relate presupposes a community with parental figures, disturbed though it might seem and the tendency to communicate verbally also rests on an undisrupted community with parental figures and by that token with human beings, altered and disturbed though it may be.

There are numerous children with symptoms similar to those who qualify for treatment but their parents cannot be counted upon. This situation may cause so aberrant an outlook on life in these children and so exceptional a type of reaction to life and its

\*Article prepared by Hertha Riese, M.D., Director, Educational Therapy Center, Richmond, Virginia.



vicissitudes that all or most of the children's life tendency may be stunted or perverted into a negation of our total culture and life itself. Whether the parents are only improvident or frankly rejecting, two fundamental types of development may result from parental neglect. Before we discuss them, may it be said that while parental attitudes in our experience with emotionally disturbed children can never be totally discounted, this does not mean that they should therefore be burdened with the total responsibility for their welfare. All of us should be willing to share in this responsibility. That is one of the basic meanings of an enlightened and cooperative effort as attempted in the Mental Health movement.

The two fundamental attitudes of a seriously neglected or rejected child will be either hopeless withdrawal from a world of hurts or an aggressive reaction to it which represents an attempt to get even with it. Either communication with the world is interrupted to the extent the child can afford without interfering with life altogether, viz, a state of pure vegetation or communication is perverted into a warlike, predominantly destructive mode of behavior. In the first case, the child may reduce his verbalism to almost naught, in the second instance what he uses when his case is grave may be but emotional speech containing idiomatic phrases of a hostile character. Close contact with these children show them to be extremely unhappy indeed. There is very little, if any, love and enjoyment of life and living in evidence. They exhibit a "don't care" attitude, risking life and any kind of danger, because one more discomfort does not count and pleasurable experiences can be discontinued altogether, unless derived from the satisfaction of obstruction and retort to hurts. But time and again, we are told not to spare the rod on these children, but punish them. While it does seem to be the obvious thing to do, it could only contribute toward reinforcing their early pessimism and despair.

Under such conditions, a child is not only unable to reveal himself by words, but he may also be unable to accept the gift of words, kind as they may be. They are not only meaningless to him, but confusing, annoying, and above all, utterly disturbing. Distrust of all that the adult world has to say, communicate and teach, may be one of the many subtle reasons why such children may shun learning and

avoid contacts with people, an inevitable consequence of school attendance.

In spite of the apparently insuperable difficulties implied in the child's isolation, due to the family habits and the rejection to which the community frequently exposes him, he is not necessarily lost but can be saved for himself and for society.

The first who has attempted to help asocial and antisocial youngsters by an undogmatic, modern, scientific approach, was August Aichorn, a psychoanalytically trained educator of impressive ability and vision. About a generation ago he started a home under the auspices of the City of Vienna. Similar attempts were or have been in existence in this country, the best known being Redls' short-lived, outstanding work in Detroit and Bettelheim's Orthogenic School in Chicago. The former was an immediate collaborator of Aichorn, now heading the Children's Division of the National Health Institute.\* Aside from the various activity techniques, all those attempts must approach these hostile children by a treatment program which takes into account their unwillingness to "relate" in the general as well as in the verbal sense of the term. They must be helped to learn both. They must be convinced that there is, besides the world they have so far experienced, a world of acceptance, which will not be perturbed by whatever their provocation. This is the real meaning of permissiveness, which does not imply condoning of undesirable behavior. The professional staff of clinics or institutions who deal with these gravely disturbed children by their unalterable poise and fond equanimity, build up solid foundations, enabling the child to trust others and venture out.

After an initial time of resistance, distrustful wavering, and testing as well as suspicious misinterpretations, fond acceptance might be reciprocated, desirable attitudes stimulated, and values might be discovered worth preserving rather than destroying. The child may become curious and tend to discover and conquer by earning and sharing in the shaping and mastery of this world, once he is convinced that he is no longer singled out by exclusion through rejection, indifference, and neglect.

---

\*The Educational Therapy Center is the only similar agency attempting such treatment on the Clinic level.

## MEDICO-LEGAL NOTES

### Similarities in the Regulation of the Practice of Medicine and of Law in the State of Virginia\*

The medical and legal professions differ in many respects, yet there are many similarities in the state laws and codes of ethics which govern the conduct of the practice of these two professions in the State of Virginia. It is the purpose of this paper to present a brief analysis of these similarities.

*I. Analysis of the Statutes.* Certain provisions governing the practice of medicine and the practice of law are similar:

(1) A state license is required to practice each profession.

(2) The statutes make it a criminal act for a person to enter into the unauthorized practice of medicine or the unauthorized practice of law.

(3) The minimum effective age of potential members of either profession to be licensed in the State of Virginia is prescribed by statutes as 21 years of age.

(4) The educational requirements of both professions are prescribed in some detail by the statutes.

(5) The composition of the examining boards and tenure of the members, which are appointed by the governor for both professions, are outlined by the statutes.

(6) The grounds for revocation or suspension of licensure are outlined by statute for both professions.

*II. Revocation or Suspension of Licensure.* The statutes provide that:

(a) *Law:* Any court before which an attorney has qualified, on proof that he has been convicted of a felony or any malpractice, or any corrupt unprofessional conduct, can revoke his license to practice therein, or suspend the same for such time as the court deems proper.

Any malpractice or any unlawful or dishonest or unworthy or corrupt or unprofessional conduct is specifically construed by statute to include the improper solicitation of any legal or professional business or employment, either directly or indirectly or the failure, without sufficient cause within a

reasonable time after demand, of any attorney at law, to pay-over and deliver to the person entitled thereto, any money, security or other property, which has come into his hands as such attorney.

(b) *Medicine:* The Board of Medical Examiners may refuse to grant reciprocity to, or may suspend or remove any certificate or license held by, any person who is of dishonorable or immoral character, or who is grossly ignorant or careless in his practice, or who is guilty of unprofessional conduct as defined in the statute. Any practitioner of medicine is considered guilty of unprofessional conduct who:

(1) Is found guilty of any crime involving moral turpitude, or is guilty of fraud or deceit in obtaining a certificate or license or otherwise obtaining admission to practice.

(2) Is an habitual drunkard or habitually addicted to the use of morphine, cocaine or other drugs having a similar effect.

(3) Undertakes or engages in any manner or by any means whatsoever to procure or perform a criminal abortion as defined by the laws of the state.

(4) Prescribes or dispenses any morphine, cocaine or other narcotics, or alcoholics, with intent or knowledge that it should be used otherwise than medicinally, or with intent to evade any law relative to the sale, use or disposition of such drugs.

(5) Issues, publishes, broadcasts by radio or otherwise, or distributes or uses in any way whatsoever, advertising matter in which grossly improbable or extravagant statements, which have a tendency to deceive or defraud the public or to impose upon credulous or ignorant persons are made, or in which mention is made of venereal diseases, disorders of the genital-urinary organs or chronic ailments.

(6) As a surgeon or physician directly or indirectly shares in any fee charged for a surgical operation or medical services with the physician who brings, sends or recommends the patients to such surgeon for operation, or to such physician for such medical services; or who, as a physician brings, sends or recommends any patient to a surgeon for a surgical operation or to a physician

\*Contributed by: Charles W. Whitmore, M.D., L.L.B., University of Virginia Hospital and School of Medicine, Charlottesville, Virginia. Medical Examiner, City of Charlottesville.

for medical services, and accepts from such surgeon or physician any portion of a fee charged for such operation or medical services.

(7) Who advertises, or professes, or holds out himself as being able and willing to treat human ailments under a system of school of practice other than that for which he holds a certificate or license granted by the Board of Medical Examiners, or advertises that he can cure and treat diseases and other human ailments by secret method, procedure, treatment or medicine.

### III. *Similarities in Codes of Ethics.*

(A) *The Legal Profession:* In addition to being regulated by Statute per se, the legal profession has an organizational arrangement known as the Integrated Bar. A licensed attorney in the State of Virginia is considered to be an officer of the Court. As such, his code of ethics is prescribed by the Court and may be enforced by it. Pursuant to the provisions of the Statutes the Supreme Court of Appeals may, from time to time, prescribe, adopt, promulgate and amend rules and regulations:

(a) Defining the practice of law.

(b) Prescribing a code of ethics governing the professional conduct of attorneys at law and a code of judicial ethics.

(c) Prescribing procedure for the disciplining, suspending and disbarring attorneys.

(B) *The Medical Profession:* The practice of medicine is regulated beyond the basic statutes and principles of the common law, only by the Principles of Medical Ethics formulated by the American Medical Association and adopted by The Medical Society of Virginia. The ability of the Society to enforce such ethical principles of practice among its membership is limited, and there is no requirement that a physician become a member of the State Medical Society.

Comparison between Principles of Medical Ethics of the American Medical Association and the Canons of Professional Ethics of the Virginia State Bar is not valid on a direct basis because of the legal enforceability of one code and the absence of such enforceability regarding the other code; however, it is felt that there are many similarities between them and that these two codes represent the best comparison available inasmuch as the membership of the American Bar Association includes less than

one-quarter of the licensed attorneys in the nation.

#### (C) *Both Codes of Ethics:*

(1) Suggest that professional courtesy should be extended to brother members of the same profession.

(2) Suggest a professional obligation to render a high standard of service to the poverty stricken and indigent.

(3) Indicate that direct and indirect advertising in order to secure employment of one's professional services is to be avoided. It should be noted that the medical practitioner may indicate specialization in a particular field of medical practice to the public at large, compatible with the extent to which they are permitted to announce their availability for employment to the public. The legal practitioner, however, may, in general, announce such specialization only to other members of the profession, and only when his services are to be rendered as consultant to other members of the profession.

(4) Indicate that fee splitting, as noted above in the earlier paragraphs of this paper, is specifically prohibited by basic statute with regard to practice of medicine. Division of fees is apparently proper in the practice of law based upon division of service or responsibility, but not otherwise. The code of legal ethics is not explicit as to the amount of information to be communicated to the client regarding such splitting of fees.

(5) Suggest that confidentiality of communications between the patient and physician or the attorney and client, be preserved. The attorney-client communication, of course, is privileged at common law to the extent that it cannot be forced to be divulged in court, whereas the patient-physician communication may be required to be divulged in court. Limitations upon the suggested confidentiality are indicated by both codes. The physician, it is suggested, may be confronted from an over-riding duty to society, which is in conflict with his duty to preserve the confidentiality of the patient's communication, particularly with reference to communicable diseases. The attorney is not bound to conceal the announced intention of the client to commit a crime and he may properly disclose such information as is necessary to prevent the act, or to protect those against whom it is threatened.

(6) Suggest that withdrawal of professional



services, once a situation has been entered where the attorney or physician undertakes to render such services, should be made only under specified circumstances and by certain outlined procedural steps.

(7) Cover such situations in which two or more professional colleagues are concerned in the ren-

dering of professional services in an individual case, one of whom is in consultant capacity, and where there is a conflict of opinion between the physician or attorney in charge of the case and the consultant. Both codes indicate that the conflict of opinions should be made known to the patient or client.

---

## BOOK ANNOUNCEMENTS

---

**Music Therapy.** Edited by EDWARD PODOLSKY, M.D., Department of Psychiatry, Kings County Hospital, Brooklyn. Philosophical Library, New York. 1954. xii-335 pages. Cloth. Price \$6.00.

This unique book is a collection of thirty-three articles by various authors concerning the scientific application of functional music to the sick.

Doctor Podolsky has collected material from various medical journals into one concise volume which gives the physician and music therapist a picture of the active interest and recent progress of investigation in this intriguing field. The excellent result of his efforts is an adequately representative and well organized compendium.

Historical aspects from ancient Egypt up to the beginnings of modern, scientific study at the turn of this century are clearly presented in an introductory survey. Subsequent chapters are devoted to various current research projects, areas of application, and techniques of presentation.

Applied functional music listening and performing are presented as being of significant value in the care and treatment of mentally and physically ill patients.

Chapters headed "Music and Mental Health", "The Value of Music in the Hospital and Operating Room", and "A Musical Program for Emotional High Blood Pressure" promise interesting reading for physicians in many diverse specialty fields as well as for hospital administrators.

Each article reflects a scientific yet humanitarian

interest which establishes the conviction of the investigators as to the efficacy of music therapy.

In our opinion, the book deserves close scrutiny and the subject deserves wider application.

GEORGE E. ARRINGTON, JR., M.D.

**The Nursing Mother.** A Guide to Successful Breast Feeding. By FRANK HOWARD RICHARDSON, M.D., F.A.C.P., F.A.A.P. Prentice-Hall, Inc., New York, 1953. 204 pages. Price \$2.95.

This book deals thoroughly with what many believe is becoming a lost art—the art of breast feeding. It is an affirmation for the nursing mother. One can feel the power of Dr. Richardson's own convictions behind much of the material presented in this book, and for the mother of today it will serve well to give her facts and possible faith in "Nature's Way".

Although this book is for the nursing mother it does not preclude the role of her physician in this endeavor. The chapters on nursing techniques and potential obstacles to successful nursing speak from vast personal experience in active pediatric practice and afford the physician many useful ideas.

The mother will find answers to innumerable contemplated questions in two chapters composed entirely of questions and simple answers. The father is discussed in a chapter defining his role in the nursing objective.

Several other subjects about baby and mother are included—rooming in, natural child birth, weaning, diet additions, all of which are interesting both for the mother and the doctor. Both could derive much benefit from reading this book.

EARL TREVATHAN, M.D.

NOTES  
ON  
PULMONARY TUBERCULOSIS\*

Special Diagnostic Studies  
Role of the Fluoroscope; Bronchoscopic Examination;  
Sedimentation Rate

Standard Diagnostic Study to confirm or exclude the presence of pulmonary tuberculosis sometimes is, and less often, *must* be supplemented by other diagnostic aids. These include: (1) *Fluoroscopic* examination of the chest, (2) *Bronchoscopic* Examination, (3) analysis of *Sedimentation Rate*.

**FLUOROSCOPE EXAMINATION.** This enables the physician to observe and to interpret directly through a fluoroscopic screen movements of the diaphragm, chest walls, and lungs (and, at times, the mediastinum) during normal breathing and in the course of forced respiration. It makes possible examination of the chest from many oblique angles which can in some instances be of great assistance to the trained and experienced observer in delineating and identifying shadows; it helps to select a proper plane for the taking of special position films to confirm and/or to record these findings.

Possible fluid levels in the pleural space or in a cavity (in the co-presence of air) can sometimes be verified by tilting the chest from one side to the other.

Upon occasion interpretation of abnormal mediastinal shadows can be facilitated by a barium swallow to outline the position of the esophagus.

Fluoroscopic examination offers a quick, economical, and satisfactory method for routine check (as at time of air refill) of the *degree of compression* of a lung being treated by pneumothorax or pneumoperitoneum, providing an important part of the close supervision so necessary for safe and successful administration of these collapse measures. Standard x-ray films must of course be taken periodically as well, to help evaluate the *course of the disease* in the compressed lung, as well as to observe the current status of the contralateral side.

While gross disease can be detected readily by fluoroscope, the latter, on the whole, is not nearly as sensitive a diagnostic aid as is the properly exposed x-ray film; the fluoroscope does not make possible as complete visualization of the finer details of lung markings, nor can it be depended upon, even in the

hands of experts, for the detection of minimal active tuberculous lesions.

Also in contrast, x-ray films provide a permanent record of the x-ray appearance of the patient's lung at the time of examination, which can be used for comparison with earlier or later films. This comparison *can* be of extreme importance when dealing with *any* disease of the chest.

**DIAGNOSTIC BRONCHOSCOPY.** This is a valuable adjunct in the diagnosis of certain pulmonary diseases. The procedure, in the hands of an experienced operator, is no longer considered hazardous for most patients. As a rule it is performed under local anesthesia.

*Indications* for bronchoscopy include (1) unexplained chronic cough and/or expectoration, whether or not associated with abnormal x-ray shadows, in persons from whose sputum (and/or gastric washings) no significant organisms can be recovered; bronchial washings performed under these circumstances have been known to establish the etiologic agent, (2) hemoptysis of undetermined origin, (3) periodic difficulty in raising sputum, (4) Subjective chest "noises" experienced by the patient.

To these *symptoms* must be added any *physical signs* which might suggest complete or partial bronchial obstruction, such as unilateral wheezing, whether localized, or general.

*X-ray findings* which, in and of themselves, merit consideration of bronchoscopy include (1) localized patches of *atelectasis*, especially segmental, (2) localized areas of *emphysema* [these are best seen on films taken *at the end of expiration* (in contrast to conventional chest films taken at full inspiration)], (3) abnormal pulmonary, hilar or mediastinal densities which remain unidentified after having been subjected to *standard diagnostic study*, (as described in the March through June issues of the VIRGINIA MEDICAL MONTHLY).

With extremely rare exceptions bronchoscopy is performed *routinely* prior to major chest surgery for tuberculosis, because of the bearing positive findings

\*Prepared by the Virginia State Health Department.

may have on the timing and method of surgical approach.

It must be appreciated that only the trachea and the larger stem bronchi normally can be visualized during bronchoscopic examination. The upper lobe bronchi are particularly difficult—sometimes impossible to visualize much beyond the mucosal lining of their respective orifices. Unfortunately definite obstructive lesions and/or other disease processes in other bronchi as well, often lie beyond the range of vision. Therefore a negative bronchoscopy may be inconclusive.

On the other hand many lesions lie well within the range of vision. Findings highly presumptive of tuberculous bronchitis, and/or of bronchial stenosis resulting therefrom, can frequently be identified by inspection alone. Biopsies can be taken of accessible lesions—a method especially useful when carcinoma is suspected. Direct examination for cellular and bacterial content from a swab of material obtained from selected patches of bronchial mucosa is sometimes diagnostic, as may be direct examination and/or culture of bronchial washings. *Tubercle Bacilli not infrequently are obtained from culture of bronchial washings when sputum and gastric lavage cultures are negative.*

While there are comparatively few outright *contra-indications* to bronchoscopy, the presence of advanced cardio-vascular disease or of allergic asthma, as well as certain other conditions even less frequently encountered in the prospective candidate, naturally would give one pause.

**SEDIMENTATION RATE.** This is a well known and still rather widely used laboratory procedure which makes use of a tendency for erythrocytes to settle out more rapidly than normal, in specimens of blood drawn from persons having *active* pulmonary tuberculosis. However, the phenomenon also is observed in the presence of other infections, in some metabolic disorders, as well as in certain types of malignancy,

etc. Thus while it appears to be one of the simplest and at the same time one of the most sensitive tests known, to demonstrate objectively the occurrence of *destructive* pathology within the body, it is strictly a *non-specific* constitutional reaction.

However, even though non-specific it can properly be regarded, when abnormal, and *attributed to tuberculosis*, as an indicator, *in and of itself*, of the presence of *active* disease, just as are *fever* and other characteristic symptoms and signs in the *known* tuberculous subject, that cannot otherwise be accounted for. Accordingly, like fever, an increase of sedimentation rate per se, can be significant both in the known case *and in the suspect*; conversely, as with temperature, the sedimentation rate may be normal even in the person who has a sputum positive for tubercle bacilli.

If an increase in sedimentation rate can be looked upon as a non-specific constitutional reaction (somewhat analagous to fever, but *perhaps more sensitive*) it will not be too surprising to find that the test is subject to many transient fluctuations of *no* clinical import.

For this reason, *repeated* tests, closely spaced, are required to prove that the sedimentation rate is sufficiently and consistently increased to be accepted as a contributory factor in any given differential diagnostic study or, indeed, of any *real* significance otherwise.

The sedimentation rate, *in and of itself*, has been known to be of unequivocal assistance, *in course of treatment*, in selected cases of tuberculosis, when, as occasionally happens, a *definite* departure from a previously established *normal base line* is observed in the absence of intercurrent infection and other complicating factors.

The test is *not* performed routinely in each of the sanatoria or clinics operated by the Virginia State Health Department.



## PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.

*State Health Commissioner of Virginia***The Control of Communicable Disease in Man**

As far back as the time when epidemics were explained as due to the wrath of the gods or visitations of evil spirits, it was observed that certain illnesses were apparently spread from person to person. A book published in 1554, *De Contagione*, by Franciscus, suggested that diseases be classified into those that were contagious and those that were not. Confusion resulted until the latter part of the 19th century when the works of Pasteur, Koch and others, established the relationship of specific microorganisms as the cause of one after another of the infectious diseases. Health departments were organized largely for the purpose of controlling the spread of communicable diseases. In the first part of the 20th century the broader aspects of preventive medicine were added.

One of the early measures of control was quarantine, a word derived from the Italian "quaranta," meaning "forty." In the middle ages Venice and other Hanseatic cities detained for a period of forty days ships arriving with cases of pestilence abroad. Quarantine refers to the detention of well persons exposed to a contagious disease for the period of incubation of the disease. The object of quarantine was to destroy, detain, or isolate infections with the least possible hindrance to trade or travel. The yellow flag was the quarantine sign of all nations and was also flown to the fore of all vessels with contagious diseases aboard. Placards announcing one or another of the contagious diseases were tacked on the doors of homes. Nobody was allowed to enter or leave; hardships were created because breadwinners were prevented from going to their work and compensation ceased through no fault of theirs.

Isolation is the segregation of the sick and of carriers of diseases. Theoretically, it is the most perfect single method to check the spread of communicable diseases; but isolation can be applied only when the cases are known. There are many cases that are so mild that they are not recognized; there are others that are improperly diagnosed; there

are many that are not reported. It has been shown that there are certain diseases, like measles, which are communicable for several days before the nature of the disease is recognized and that isolation practically does not diminish the prevalence of these infections. Increased knowledge of the methods of spread of certain diseases has made isolation of certain individuals with these diseases more effective.

In the past, geographical isolation was one of the safeguards in the control of the spread of disease. In modern times improvements in transportation have overcome this isolation and the diffusion of infection is facilitated.

Sanitation has obviated the need for quarantine. Pure, well protected and approved water supplies, sanitary sewage disposal, adequate laws for milk production and distribution, including pasteurization, rodent and insect control measures, vaccinations and immunizations, the recognition of the modes of transmission of certain diseases through animals to man have brought about the "cure" for quarantine. Isolation of the patient is still practical in many diseases on the basis that if only one other case of infection is prevented, there is justification to continue the practice. Ideal isolation can be more readily carried out in hospitals or sanatoria, but many hospitals do not accept patients with contagious diseases. The next best isolation is in the home with a trained attendant. There are also degrees of isolation: a case of yellow fever may be isolated under a mosquito net, a case of smallpox must have absolute isolation. A typhoid carrier should not be imprisoned; it is sufficient to have them registered and to teach them how they may avoid spreading the disease, to vaccinate the members of their households and to prevent their occupation in kitchens, dairies, or handling foodstuffs.

Contacts of certain communicable diseases are isolated for the period of incubation of the disease in question; there is no isolation for the contacts of certain other communicable diseases. There is no point in isolating contacts who possess immunity as the result of having had the disease.

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	May 1954	May 1953	Jan.- May 1954	Jan.- May 1953
Brucellosis -----	6	4	15	20
Diphtheria -----	2	3	24	48
Hepatitis -----	319	342	2420	1096
Measles -----	6419	1252	19179	3637
Meningococcal Infections -----	11	18	57	122
Poliomyelitis -----	7	9	23	20
Rocky Mt. Spotted Fever -----	6	6	7	8
Streptococcal Infections ----- (Including Scarlet fever)	485	502	2756	3135
Tularemia -----	0	1	17	15
Typhoid Fever -----	6	5	20	17
Rabies in Animals -----	34	41	208	235

Having educated the public to the need for quarantine and strict isolation of patients and contacts, it has become the duty of public health personnel during the past 15 or 20 years to re-educate the people to the fact that sanitation has taken the place of quarantine and that isolation may be practiced in a more limited fashion. The Virginia State Board of Health has adopted the rules and regulations as contained in the booklet, *The Control of Communicable Diseases in Man*, published by the American Public Health Association. This booklet is in each health department in the state and was distributed to the physicians who were on the reporting list in 1950, and copies have been sent to those who have entered practice since then.

### Record Number of Physicians.

An all-time record number of physicians—218,522—were licensed to practice medicine in the United States at the close of 1953, it was disclosed in the 52nd annual report on medical licensure of the American Medical Association's Council on Medical Education and Hospitals.

Of this total, 156,333 were engaged in private practice, 6,677 were engaged in full-time research and teaching and were physicians employed by insurance companies, industries, and health departments, 29,161 were interns and residents in hospitals and those engaged in hospital administration, 9,311 were retired or not in practice, and 17,040 were in government service.

According to the report, during 1953 there were 14,434 licenses to practice medicine issued by the 48 states, the District of Columbia, Alaska, Canal Zone, Guam, Hawaii and Puerto Rico—an increase of 1,206 over the number issued during 1952 and the third largest number issued in the history of this country. Of this total, 6,565 were granted after written examination and 7,869 by reciprocity or endorsement of state licenses or the certificate of the National Board of Examiners. The majority of those issued by reciprocity or endorsement were to already licensed physicians who moved their practice from one state to another.

The data presented in the report showed that

last year 7,276 physicians received their first license to practice medicine. In the same period there were approximately 3,421 deaths of physicians reported, so that there was a net gain of 3,855 in the physician population in the United States and its territories and outlying possessions. During 1952, there was a net gain of 2,987.

### Few Physicians Retire.

Of the 22,296 physicians in the age group 65-74 in the United States as of April, 1950, 18,770 or 84.2 per cent, were in active private practice according to data contained in a new bulletin released by the Bureau of Medical Economic Research of the American Medical Association.

Commenting on the figure, the *Journal of the A.M.A.* said editorially in the May 29th issue:

"Only 15.8 per cent were not engaged in active private practice. Among these 3,526 not in active private practice were housewives and others who had practiced for only a few years, if any, and several hundred who were still employed by private or public employers; still others had retired from private or public employment, probably on a pension financed in whole or in part by the employer. . . .

"If the pattern of 1950 is continued, eight or nine physicians out of 10 would be required to pay social security taxes but would receive no pension from age 65 to 75."

## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

*President* ..... MRS. K. W. HOWARD, Portsmouth  
*President-Elect* ..... MRS. MAYNARD EMLAW, Richmond  
*Recording Secretary* ..... MRS. LEE S. LIGGAN, Irvington  
*Corresponding Secretary*—  
    MRS. LEMUEL E. MAYO, Portsmouth  
*Treasurer* ..... MRS. WILLIAM C. BARR, Richmond  
*Publication Chairman* MRS. WM. S. GRIZZARD, Petersburg

### Richmond.

The Woman's Auxiliary to the Richmond Academy of Medicine collected sample drugs sent to doctors



Mrs. John B. Truslow—bringing drug samples into the Academy building.



Mrs. Frederick L. Finch and Mrs. Reuben F. Simms—sorting drugs.

in Richmond and its suburbs by pharmaceutical companies. The samples were taken to the Richmond Academy of Medicine Building where they were sorted alphabetically and then into various therapeutic categories.

Mrs. Gordon D. Hall, chairman of the project, was assisted by 56 members of the Auxiliary, Dr. J. W. Boenigk, Dr. M. L. Newrath and Mr. Russell Fiske of the pharmacy department of the Medical College of Virginia and members of the junior and senior classes in pharmacy at the M.C.V.



Mrs. Gordon B. Hall, collection chairman, and Mrs. Custis D. Coleman, President—presenting drugs to Miss Laura Victor at Sheltering Arms Hospital.

The samples were valued at \$5,100.00. They were distributed to the following charity institutions in Richmond: Sheltering Arms, Retreat for the Sick and Crippled Children's Hospitals, Pine Camp, City Home and Home for Incurables.



## EDITORIAL

## Cancer of the Breast

CANCER of the breast is a disease which has been recognized for almost as long as we have written records. It was described independently by the Egyptians and Persians prior to 800 B. C. Celsus, who lived at the time of Christ, diagnosed cancer of the breast and described a technique for mastectomy. He also noted involvement of the axillary lymph glands that accompanied cancer of the breast. Leonides of Alexandria described the symptoms, including retraction of the nipple, as a sign of cancer in 180 A.D. Through the centuries there was slow but gradual increase in the knowledge of the appearance and course of this condition but no attack was made upon the etiology and very little information was gained about the treatment until the latter part of the nineteenth century.

In the 1890's, Halstead and Willy Meyer described the technique and rationale for radical mastectomy. Since that time there have been a few modifications and extensions of the original procedure but the fundamental approach has changed but little.

Among the more recent extensions of the Halstead radical mastectomy have been Wangenstein's supraclavicular and mediastinal dissections and Urban's resection of the chest wall and internal mammary vessels and nodes. Adair has suggested that prior to doing a radical mastectomy, the first and second intercostal spaces on the involved side be explored for nodes. If these nodes were positive for malignant spread, the hope of cure by radical mastectomy was so slight that the extensive procedure was not warranted.

Although there has been little improvement in the surgical approach during the past sixty years, the prognosis in cancer of the breast has gradually been improved, due largely to education of the physicians and lay public and to improvement in therapeutic adjuncts to surgery.

Pre- and post-operative irradiation therapy has improved the percentage of five-year survivals, and at the present time deep x-ray therapy for those patients with axillary metastasis is generally employed.

McWhirter in Scotland has combined a simple mastectomy with intensive post-operative irradiation and has reported results equally as good as those from leading medical centers in this country. However, the results have not been accepted in America and use of this method of treatment should be delayed until a recognized center in this country has had time to study McWhirter's technique and evaluate it.

The relationship between ovarian stimulation and carcinoma of the breast is unknown, but certain cases do seem to be partially dependent on the female hormone for their growth. In advanced cases, it has been found that sterilization, either surgically or by irradiation, sometimes slows the growth, particularly in the pre-menopausal group. With this in mind, routine removal of the ovaries in all pre-menopausal women who develop carcinoma of the breast is practiced by some surgeons. Reported results are encouraging, but the series are too small yet for this procedure to be generally accepted.

In the treatment of late cases or of distant recurrences, hormone therapy has been of definite value. In general, androgens should be used in women under sixty, with estrogens in the older age group. Where benefit in a particular case has been demonstrated upon removal of the ovaries, additional benefit occurs upon removal of the adrenals along with substitution therapy with cortisone.

Aspiration of cysts and aspiration biopsy of solid tumors are procedures practiced by some surgeons. The proponents of this method of treatment argue that error is

slight and that with aspiration, physical and mental trauma is minimized. However, most surgeons do not approve, as intracystic papillomas, some of them malignant, will be missed. Also, removal and examination of the entire mass is more accurate than aspiration biopsy.

Until such time as further knowledge concerning the cancer problem is available, the most important contributions to therapy in cancer of the breast lie in removal of all isolated breast masses and in continuation of education of the public so that these lesions will be brought to the physician's attention at an early stage in their growth. While it is important to remember that a permanent cure cannot ever be prognosticated in any individual case, the earlier the lesion, the greater the chance of a cure.

HUGH H. TROUT, JR.  
Jefferson Hospital  
Roanoke, Va.

---

## SOCIETIES

### **Arlington County Medical Society.**

At the meeting of this Society on May 20th, Dr. Isadore Rodis, professor of psychiatry at Georgetown University Medical School, spoke on "The Nervous Patient", which dealt with the application of practical psychiatry in every doctors office.

Dr. John Hazel reported that the three Arlington winners in the essay contest, sponsored by the society, all won Honorable Mention in the National A.A.P.S. contest. These essays were on Why the Private Practice of Medicine Affords Us the Best Medical Care and was open to high school students.

The annual dinner dance was held on June 10th at the Washington Golf and Country Club.

Dr. J. R. B. Hutchinson is president of this Society.

### **Norfolk County Medical Society.**

On May 17th, this Society met at the U. S. Public Health Service Hospital. Dr. Robert T. Maddock led a discussion on Hemolytic Jaundice and Dr. Robert M. Farrier gave cases reports.

Dr. Clayton W. Eley is President and Dr. Donald T. Faulkner, secretary.

### **The Fairfax County Medical Society**

Met on May 11th at the home of Dr. Emanuel Newman in Falls Church. Dr. John Sullivan of Arlington spoke on Peripheral Vascular Disease.

The June meeting was held at the home of Dr. Gerald J. Inguagiato, also of Falls Church.

### **Virginia Peninsula Academy of Medicine.**

The regular monthly meeting of the Academy was held on May 19th with the Staff of the Veterans Administration Hospital at Kecoughtan as hosts.

Following a social hour at the Hampton Country Club and dinner at the VA Hospital, the scientific program was given. This was a clinical-pathological conference conducted by Dr. C. M. Caravati, Associate Professor of Clinical Medicine at the Medical College of Virginia.

### **Mid-Tidewater and Northern Neck Medical Societies.**

On April 14th at Tappahannock, a clinical session was held before these two societies under the auspices of the Department of Postgraduate Medical Education of The Medical Society of Virginia. The following program was presented: Problems in Geriatric Medicine by Dr. John Lynch; Jaundice by Dr. James O. Burke; Newer Antibiotics by Dr. Count D. Gibson, Jr., Office Problems in Otolaryngology by Dr. P. N. Pastore; and The Treatment of Rheumatoid Arthritis by Dr. Elam C. Toone, Jr. All lecturers were from the Medical College of Virginia.

### **The Virginia Orthopedic Society**

Held its annual clinical meeting at Norfolk on March 26-27, under the presidency of Dr. Bernard D. Packer, Richmond. The following program was presented: Low Back Pain by Dr. A. A. Kirk, Portsmouth; Chondromyalacia of the Patellae by Dr. John Thiemeyer, Norfolk; Interesting Tumors of the Humerus by Drs. Wieman H. Kretz and F. Ashton Carmines, Newport News; Seven Cases with Hip Prostheses by Dr. George G. Hollins, Norfolk; A Case Report of Fanconi's Syndrome with X-ray Diagnosis by Dr. John Foster, Norfolk, with a pathological discussion by Dr. John Bos, also of

Norfolk; and Fractures of the Tibia by Dr. F. E. Thornton, Portsmouth. Dr. J. Leonard Goldner, Duke University, was the invited guest speaker, and presented a movie on Reconstructive Surgery of the Hand in Cerebral Palsy.

The secondary portion of the meeting was closed following a presentation of interesting cases by the staff of the Naval Hospital with a general discussion.

Dr. William M. Deyerle, Richmond, is secretary-treasurer of this Society.

### **The Montgomery County Medical Society**

Held its spring meeting at Grant's Tavern, Christiansburg, on April 22nd. The following officers were elected for the coming year: Dr. H. R. Hartwell, president; Dr. C. F. Manges, vice-president;

and Dr. D. D. Chiles, secretary-treasurer.

Dr. James B. Hutcheson of Roanoke spoke on Indications for Whole Blood Transfusions.

### **Medical Association of the Valley of Virginia.**

At the meeting of this Association on May 27th, Dr. Brian Blades, professor of surgery at George Washington University School of Medicine, spoke on "Intra Thoracic Tumors".

### **The Southwestern Virginia Medical Society**

Will hold its annual meeting at the Hotel Roanoke, Roanoke, on September 16th. The program committee is working on an interesting and instructive panel discussion to be supplemented by local presentations.

## **NEWS**

### **Calendar of Coming Events**

ANNUAL ASSEMBLY IN OTOLARYNGOLOGY—University of Illinois College of Medicine—Chicago, September 6-11

AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION—Washington, D. C., September 6-11

AMERICAN ASSOCIATION OF BLOOD BANKS—7th Annual Meeting—Shoreham Hotel, Washington, D. C., September 13-15

THE MEDICAL SOCIETY OF VIRGINIA—(Annual Meeting)—First Interstate Scientific Assembly—Shoreham Hotel, Washington, D. C., October 31-November 3

### **Commencements of Medical Schools.**

#### **UNIVERSITY OF VIRGINIA SCHOOL OF MEDICINE**

The commencement exercises at the University of Virginia began on June 11th with registration, the golf tournament, class dinners and the formal ball for members of the alumni association. The Baccalaureate Sermon was given by Rev. Paul N. Garber, Methodist Bishop of Richmond, on Sunday at Cabell Hall. Honorable A. Willis Robertson, Senator from Virginia, was the speaker at the Graduation Exercises held on the 14th.

Following are graduates in medicine with hospital appointments:

UNIVERSITY OF VIRGINIA HOSPITAL, Charlottesville—Drs. Claude Ballenger, Jr., East Orange, N. J.; James R. Brunk, Harrisonburg; Louis C. Craig, Corpus Christi, Tex.; Maxwell C. Feinman,

Lynchburg; Conway H. Ficklen, Fredericksburg; Milton Greenberg, Danville; Charles W. Hurt, Culpeper; Benno Janssen, Jr., Charlottesville; Wilburn E. Jarrell, Mt. Airy, N. C.; Earl R. Johnson, Jr., Roanoke; William D. Liddle, Jr., Richlands, Edmund H. Rucker, Jr., Richmond; George W. Sessions, Savannah, Ga.; James B. Spillman, II, Staunton; Teddy C. Staples, Winchester; Lilburn T. Talley, Richmond; Lee H. Thompson, Park Ridge, Ill; and Ceilous L. Williams, Colonial Heights.

MEDICAL COLLEGE OF VIRGINIA HOSPITALS—Richmond—Dr. Emerson D. Baugh, Jr., Lawrenceville.

NORFOLK GENERAL HOSPITAL, Norfolk—Drs. William F. Early, Forest Hills, L. I., N. Y.; and James L. Stringfellow, Culpeper.

MEMORIAL AND CRIPPLED CHILDREN'S HOSPITAL, Roanoke—Dr. Amiss Ross Lillard, Stephens City.



UNIVERSITY HOSPITAL, Cleveland, Ohio—Drs. Donald M. Allen, Front Royal; David C. Davis, Alexandria; James A. Doull, Jr., Arlington; Ralph A. Jackson, Jr., Arlington; John H. Jolly, Holland; and Webb M. Thompson, Jr., Virginia Beach.

CINCINNATI GENERAL HOSPITAL, Cincinnati, Ohio—Drs. Henry B. Betts, Miami, Fla.; Henry F. Conquest, Richmond; and Ernest G. Rafey, Hopewell.

CLEVELAND CITY HOSPITAL, Cleveland, Ohio—Dr. Wayne L. Johnson, Roanoke.

ST. LUKE'S HOSPITAL, Cleveland, Ohio—Dr. John H. Moling, III, Winchester.

UNIVERSITY HOSPITAL, Columbus, Ohio—Dr. Hubert A. Marshall, Roanoke.

GRACE HOSPITAL, New Haven, Conn.—Dr. Stuart Ashman, Norfolk.

NEW ENGLAND CENTER, Boston, Mass.—Dr. Gerald D. Aurbach, Charlottesville.

LONG ISLAND COLLEGE HOSPITAL, Brooklyn, N. Y.—Dr. Charles M. Biller, Arlington.

STRONG MEMORIAL HOSPITAL, Rochester, N. Y.—Dr. Meriwether C. Blaydes, Spotsylvania.

THE NEW YORK HOSPITAL, New York, N. Y.—Dr. Harrison O. Brown, Jr., Virginia Beach.

KING'S COUNTY HOSPITAL, Brooklyn, N. Y.—Dr. Kenneth A. Morrissey, Bergenfield, N. J.

FITZSIMONDS ARMY HOSPITAL, Denver, Col.—Drs. Stanley C. Boyce, Winchester; and Beryl H. Owens, Rose Hill.

STATE UNIVERSITY HOSPITAL, Iowa City, Ia.—Drs. John S. Chapman, Lexington; William C. Greer, Rocky Mount; Guy C. Heyl, Jr., Warrenton; and Joe E. McCary, Princeton, W. Va.

NORTH CAROLINA MEMORIAL HOSPITAL, Chapel Hill, N. C.—Dr. Junius E. Crowgey, Roanoke.

COLUMBIA HOSPITAL, Columbia, S. C.—Dr. Ralph M. Curt, Arlington.

THE LANKENAU HOSPITAL, Philadelphia, Pa.—Dr. John W. Fewell, Charlottesville.

VALLEY FORGE ARMY HOSPITAL, Phoenixville, Pa.—Dr. William F. Olinger, Big Stone Gap.

ST. LOUIS CITY HOSPITAL, St. Louis, Mo.—Dr. John R. Gill, Jr., Mathews.

BARNES HOSPITAL, St. Louis, Mo.—Drs. James H. Johnson, Woodville; and Paul E. Prillaman, Jr., Ronceverte, W. Va.

UNIVERSITY OF OKLAHOMA HOSPITAL, Oklahoma City, Okla.—Dr. Alastair N. Guthrie, Portsmouth.

MERCY HOSPITAL, Baltimore, Md.—Dr. James A.

Higgs, Jr., Staunton.

UNION MEMORIAL HOSPITAL, Baltimore, Md.—Dr. Beverley B. Jones, Roanoke.

SINAI HOSPITAL, Baltimore, Md.—Dr. Edward O. Leventon, Norfolk.

UNIVERSITY OF MARYLAND HOSPITAL, Baltimore, Md.—Dr. Stanley D. Rosenthal, Culpeper.

CHARLESTON GENERAL HOSPITAL, Charleston, W. Va.—Drs. Harold D. Hill, Franklin, Mo.; and Edward G. Lewis, Charleston, W. Va.

OHIO VALLEY GENERAL HOSPITAL, Wheeling, W. Va.—Dr. Robert A. Orr, Leesburg.

GRADY MEMORIAL HOSPITAL, Atlanta, Ga.—Dr. Alvin J. Hurt, Roanoke.

EMORY UNIVERSITY HOSPITAL, Atlanta, Ga.—Dr. Mason G. Robertson, Savannah, Ga.

BROOKE GENERAL HOSPITAL, San Antonio, Tex.—Dr. Willie H. Morris, Jr., Lynchburg.

WILLIAM BEAUMONT ARMY HOSPITAL, El Paso, Tex.—Drs. Reigh E. Peck, Danville; and Frank V. Tweedy, Lynchburg.

MADIGAN ARMY HOSPITAL, Tacoma, Wash.—Dr. Philip M. Kernan, Jr., Winchester.

WALTER REED HOSPITAL, Washington, D. C.—Dr. Robert M. Kesler, Riverton.

VIRGINIA MASON HOSPITAL, Seattle, Wash.—Dr. Theodore N. Steffen, Hammond, Ind.

VANDERBILT UNIVERSITY HOSPITAL, Nashville, Tenn.—Dr. John B. Taylor, Bluefield, W. Va.

#### MEDICAL COLLEGE OF VIRGINIA

The Commencement Exercises of the one hundred seventeenth session of the College were held on June 1st. The Commencement address was made by Samuel M. Bemiss, vice-president of the Board of Visitors. Honorary Degree of Master of Science in General Medicine was bestowed on Dr. James L. Hamner, Mannboro, and of Doctor of Science on Dr. Randolph Lee Clark, Jr. There were 100 graduates in medicine, 51 in dentistry, 48 in pharmacy, 53 in nursing, 39 in physical therapy, 10 in hospital administration, and 21 in medical technology.

The following are graduates of the School of Medicine with hospital appointments:

MEDICAL COLLEGE OF VIRGINIA HOSPITALS, Richmond—Dr. Charles Dick Burch, III, Richmond; Hall Gibbons Canter, Harrisonburg; Rees Cecil Chapman, Tazewell; James Foster Crosby, Richmond; William Harvey Dewhurst, Huntington, W. Va.; Billie Louise Wright Elliott, Richmond; Doug-

las William Ey, Lexington, Ky.; Edgar Clinton Goldston, Petersburg; Charles Anthony Hoffman, Jr., Huntington, W. Va.; Sophocles Dimitri Marty, Norfolk; Edna Teresa Maura, Rio Piedras, P. R.; Samuel Burton Rentsch, Jr., Derby, Conn.; Samuel Benjamin Ryburn, S. Charleston, W. Va.; George Elmore Salley, Richmond; Paul Herbert Schellenberg, Arlington; Alton Rivington Sharpe, Jr., Richmond; William Thomas Stuart, Jr., Richmond; and Ellis Nathaniel Zuckerman, Petersburg.

JOHNSTON-WILLIS HOSPITAL, Richmond—Drs. Thomas Robert Argiro, Fairmont, W. Va.; Robert Roland Bender, Cranbury, N. J.; James Henry Dwyer, Lorton; John Thomas Edmonds, Accomac; Ivan Vasil Magal, Brussels, Belgium; Randolph McCutcheon, Jr., Richmond; Betty Jane Richter, Mona, W. Va.; and William Garrett Rickard, Morgantown, W. Va.

DEPAUL HOSPITAL, Norfolk—Drs. Edward Adolphus Barham, Jr., Portsmouth; Donald Morris Callahan, Roanoke; Waverly Manson Cole, Blackstone; James Dalton Price, Norfolk; Charles Emmett Swecker, Roanoke; and Robert Owen Williams, Arlington.

NORFOLK GENERAL HOSPITAL, Norfolk—Drs. Baxter Israel Bell, Jr., Williamsburg; Leonard Leslie Davis, Jr., Portsmouth; Sarah Elizabeth Forbes, Warwick; and Emerson Lynn Kirby, Victoria.

UNITED STATES NAVAL HOSPITAL, Portsmouth—Drs. Letcher Blackwell Barnes, Blackstone; Donald Leslie Baxter, Richmond; Alan Edson Kinsel, Richmond; Robert Carter Kluge, Richmond; and George Stanley Mitchell, Jr., Richmond.

MEMORIAL AND CRIPPLED CHILDREN'S HOSPITAL, Roanoke—Drs. Lawrence Daniel Burtner, Harrisonburg; Freeman Wesley Jenrette, Roanoke; and Robert Day Richards, Blacksburg.

LEWIS-GALE HOSPITAL, Roanoke—Drs. Robert Milton Cook, Jr., Richmond; and Thomas Porter Long, Lindside, W. Va.

WINCHESTER MEMORIAL HOSPITAL, Winchester—Drs. Donald Hanson McNeill, Jr., Richmond; Alton Linwood Powell, III, Richmond; and Joseph Addison Vance, III, Old Church.

UNIVERSITY HOSPITALS, Columbus, Ohio—Drs. Thurl Ernest Andrews, Covington; Helen Lee Jones Driskill, Portsmouth; William Lawson Driskill, Lynchburg; Antonio Gialamas, Weirton, W. Va.; James Vincent McKenzie, Quinwood, W. Va.; Alan Verl Yoho, Grafton, W. Va.; and Emma Jane Smith,

Yoho, Lost Creek, W. Va.

MERCY HOSPITAL, Springfield, Ohio—Dr. Gail William Busch, Jr., Shinnston, W. Va.

SPRINGFIELD CITY HOSPITAL, Springfield, Ohio—Dr. David Dawson Smith, Logan, W. Va.

PEOPLES HOSPITAL, Akron, Ohio—William Bruce Hall, Jr., Critz.

TRIPLER ARMY HOSPITAL, Honolulu, Hawaii—Dr. Delmer Robert Bennett, Richmond.

EDWARD J. MEYER MEMORIAL HOSPITAL, Buffalo, N. Y.—Dr. Irwin Mendel Bogarad, Weirton, W. Va.

STATE UNIVERSITY OF NEW YORK MEDICAL CENTER, Syracuse, N. Y.—Drs. William Taylor Dabney, III, Richmond; and Archibald Cunningham Wagner, Huntington, W. Va.

BROOKLYN HOSPITAL, Brooklyn, N. Y.—Dr. Gerald Theodore Zwiren, Brooklyn, N. Y.

UNIVERSITY HOSPITALS, Madison, Wis.—Drs. Charlotte Van Valkenburgh Boynton, Essex, Conn.; Manuel Oscar Jaffe, Richmond; Lewis Lunsford, Jr., Brookhaven, Ga.; Richard Milton Newton, Narrows; and Frances S. Anderson Williams, Lynchburg.

ORANGE MEMORIAL HOSPITAL, Orlando, Fla.—Drs. Paul Morrison Burd, Richmond; and George Allen Thompson, Bastian.

MOUND PARK HOSPITAL, St. Petersburg, Fla.—Drs. Rudolph Charles Garber, Jr., Richmond; Henry Tucker Harrison, Jr., Danville; and Marion Francis Wells, Richmond.

UNITED STATES NAVAL HOSPITAL, Great Lakes, Ill.—Dr. James Reginald Cochran, Warwick.

COOK COUNTY HOSPITAL, Chicago, Ill.—Dr. William David McLean, Beckley, W. Va.

PHILADELPHIA GENERAL HOSPITAL, Philadelphia, Pa.—Dr. Lawrence Stanley Cowling, Newport News.

UNIONTOWN HOSPITAL, Uniontown, Pa.—Dr. Jimmie Lee Harris, Alderson, W. Va.

SACRED HEART HOSPITAL, Norristown, Pa.—Drs. John Paul Heatwole, Harrisonburg; and William Edwin Reisch, Bridgewater.

WAYNE COUNTY GENERAL HOSPITAL, Eloise, Mich.—Dr. Harold William Felton, Rowlesburg, W. Va.

MT. CARMEL MERCY HOSPITAL, Detroit, Mich.—Dr. Pendleton Emmett Thomas, III, Richmond.

CHARLESTON GENERAL HOSPITAL, Charleston, W. Va.—Drs. Lewis Nevin Fox, Prenter, W. Va.; William Henry Harriman, Jr., Terra Alta, W. Va.; John B. Markey, Sharples, W. Va.; Glenn Frederick

Van Winkle, Charleston, W. Va.; and Thomas Cabell Wilson, S. Charleston, W. Va.

ST. MARY'S HOSPITAL, Huntington, W. Va.—Dr. Don Franklin Hatten, Ceredo, W. Va.

UNIVERSITY OF MINNESOTA HOSPITALS, Minneapolis, Minn.—Drs. Philip Frederick, Jr., Richmond; Dr. Lloyd Lynton Goulder Jr., Petersburg; and Ralph Miles Robinson, Norton.

UNIVERSITY HOSPITAL, Augusta, Ga.—Drs. Julius Temple Goodman, Christiansburg; and Ohlen Rudolph Wilson, Galax.

JEFFERSON-HILLMAN HOSPITAL, Birmingham, Ala.—Dr. Thomas Winston Gouldin, Tappahannock.

COLORADO GENERAL HOSPITAL, Denver, Colo.—Dr. Mary Lou Hoover.

WORCESTER CITY HOSPITAL, Worcester, Mass.—Dr. Charles Thomas Lively, Charleston, W. Va.

MARY HITCHCOCK MEMORIAL HOSPITAL, Hanover, N. H.—Dr. Laurie Earl Rennie, Richmond.

SINAI HOSPITAL, Baltimore, Md.—Dr. Philip Arnold Rosenfeld, Richmond.

JOHNS HOPKINS HOSPITAL, Baltimore, Md.—Dr. Edward Hewitt Sharp, Richmond.

MADIGAN ARMY HOSPITAL, Tacoma, Wash.—Dr. Samuel Albert Tisdale, Jr., Portsmouth.

### **Medical College of Virginia, Alumni Association.**

The annual meeting of the Alumni Association was held in Richmond, May 30-June 1, under the chairmanship of Dr. Harold I. Nemuth. The alumni reunion banquet has grown so large that it was held in two banquet halls at the John Marshall Hotel with duplicate programs. Mr. J. Curtis Nottingham was installed as President, succeeding Dr. J. Asa Shield, and Dr. William N. Hodgkin, Warrenton dentist, was named president-elect.

### **Dr. Wyndham B. Blanton,**

Richmond, has retired as director of the immunology clinic at the Medical College of Virginia, which he organized in 1936. He is being succeeded by Dr. E. B. Owens. Dr. Blanton's associates in the clinic gave a dinner in his honor at the Commonwealth Club and presented him with a silver bowl in token of their friendship and admiration for his conduct of the clinic during the past 18 years.

Dr. Blanton will continue as clinical professor of medicine at the College.

### **Dr. Wallace Honored.**

Four members of the Holston Valley Community Hospital staff, Kingsport, Tenn., were honored at a testimonial dinner on May 25th for fifty years of public service. One of these was Dr. A. McG. Wallace of Gate City. They were presented scrolls in the form of an open book mounted on a wooden base. Dr. Wallace began his practice in the Moccasin Gap section and has practiced in Scott County since 1903.

### **Community Memorial Hospital at South Hill Dedicated.**

Dedication ceremonies for this 53-bed hospital were held on May 30th, ending almost two years of construction and four years of planning and fund-raising efforts in the tri-county area. Facilities include administration office, solarium, library, kitchen and dining room. Next to the emergency room is a four-bed emergency ward. The laboratory and x-ray department is located in the same area. Major and minor operating rooms make up the operating suite. Extending to the rear of the hospital are two wings for patient care—the east wing is obstetrical and the west wing medical and surgical.

### **Roanoke Physicians Honored.**

Dr. P. A. Wallenborn, Jr., has been voted the outstanding member for the State of Virginia for the past year by the Junior Chamber of Commerce. Dr. John A. Martin was awarded the key of the Roanoke Junior Chamber of Commerce for being the outstanding member in this chapter in the past year.

### **The Southern Surgeons Club**

Held a four-day conference in Richmond, May 14-18. The Club is composed of surgeons from various southern states who took their American Board of Surgery examinations the same year. Drs. Guy W. Horsley and Benjamin W. Rawles, Jr., are the Richmond members. The week-end was spent in Williamsburg and at Virginia plantations, and on the 17th surgeons at the Medical College of Virginia conducted clinical demonstrations. Papers were presented by eight members of the Club. Dr. Wyndham Blanton was the speaker at the final banquet. Dr. Rawles was elected a vice-president for the year. The president is Dr. David H. Poer of Atlanta.

### **Dr. Cullen Pitt,**

Richmond, was elected chairman of the Middle



Atlantic Life Insurance Medical Directors Club at a meeting on May 14th.

**Dr. Southgate Leigh, Jr.,**

Norfolk, has been named chief surgeon for the Seaboard Air Line Railroad, succeeding Dr. Joseph D. Collins, Portsmouth, who has retired.

**Research Awards.**

Applications for research awards to be made during the coming year by the American Heart Association and its affiliates throughout the country are now being accepted, according to an announcement by Dr. Robert L. King, Chairman of the Association's Scientific Council, and Dr. R. Bryan Grinnan, President of the Virginia Heart Association.

Applications for Research Fellowship and Established Investigatorships may be filed up to September 15, 1954. Applications for research grants-in-aid will be accepted up to December 1, 1954. Information and forms may be obtained from the Medical Director, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

**Funds for Virginia Hospitals**

The Virginia Hospital Advisory Council has adopted a plan for the distribution of \$2,300,000 in State funds for hospital construction. Nine hospital projects will receive these funds. They are the Memorial and Crippled Children's Hospital, Roanoke; Louise Obici Memorial Hospital, Suffolk; Burrell Memorial Hospital, Roanoke; Bedford County Memorial Hospital, Bedford; Franklin Memorial Hospital, Rocky Mount; Retreat for the Sick, Richmond; Richmond Memorial Hospital, Richmond; Radford Community Hospital, Radford; Lynchburg General Hospital, Lynchburg.

**Dr. Frederick B. Mandeville,**

Richmond, has been elected president of the Virginia Alumni Society of the University of Pennsylvania. He is head of the X-Ray Department at the Medical College of Virginia.

**Dr. J. M. Emmett,**

Clifton Forge, has been reappointed for a four-year term as a member of the Board of Visitors of the

University of Virginia.

**"Newer Developments in Cardiovascular Diseases".**

A course in this subject will be given at The Mount Sinai Hospital, New York, October 11-15, under the auspices of the American College of Physicians. As the title implies, the recent advances will be stressed. Dr. Arthur M. Master and Dr. Charles K. Friedberg will direct the course and prominent cardiologists and cardiac surgeons will participate.

**The National Society for Crippled Children and Adults**

Will hold its 31st Convention at the Hotel Statler, Boston, November 3rd through the 5th of this year.

**The International Academy of Proctology**

Announces its Annual Cash Prize and Certificate of Merit Contest for 1954-1955. The best unpublished contribution on Proctology or allied subjects will be awarded \$100.00 and a Certificate of Merit. Certificates will be awarded also to physicians whose entries are deemed of unusual merit. This competition is open to all physicians in all countries, whether or not affiliated with the International Academy of Proctology. The winning contributions will be selected by a board of impartial judges, and all decisions are final.

All entries are limited to 5,000 words, must be typewritten in English, and submitted in five copies. All entries must be received no later than the first day of February, 1955, and should be addressed to the International Academy of Proctology, 43-55 Kissena Boulevard, Flushing, New York.

**For Sale.**

Ranch type cottage furnished. Three bedrooms, large living room with fireplace, bathroom, kitchen, front porch and large breezeway. Located off highway #33, about 60 miles from Richmond and 5 miles from Urbanna. Over two acres of land with sandy beach. Gas stove, electric refrigerator and electric water pump. If interested, write "Cottage", care Virginia Medical Monthly, P. O. 5085, Richmond 20, Va. (*Adv.*)

## OBITUARIES

**Agnes V. Edwards.**

With the death of Miss Agnes V. Edwards on May 22, The Medical Society of Virginia lost one of its most loyal and devoted servants.

Miss Edwards literally gave her life to the Society and more particularly to the Virginia Medical Monthly, of which she served as managing editor from 1919 to her death. The high regard in which the Monthly is now held is due in no small part to her efforts.

Born seventy-six years ago, the third child of Dr. Landon B. Edwards, she carried on to new heights the work founded and nurtured by her illustrious father. It was Dr. Edwards who helped reorganize The Medical Society of Virginia in 1870 and who started the Monthly as a private enterprise in 1874.

Miss Edwards also served as Executive Secretary-Treasurer of the Society from 1924 to 1950. She made her mark in other places also, and will always be remembered as a charter member of the Medical Society Executives Conference and a member of its executive committee in 1947.

Beloved by all who knew her, Miss Edwards will long live in their memory. Carrying on her work is one thing—replacing her is another.

**Dr. Edwin Partridge Lehman,**

Widely known Charlottesville physician, died May 27th, in a Boston hospital while en route to a class reunion at Williams College, Williamstown, Massachusetts. He was sixty-six years of age and a graduate of Harvard Medical School in 1914. Dr. Lehman retired last June as professor and chairman of the department of gynecology and surgery at the University of Virginia, School of Medicine, with which he had been connected twenty-five years. He had received many tributes and honors of local, national and international character and was chairman of the Cancer Committee of the American College of Surgeons, president of the surgical section of the Southern Medical Association and a founder of the American Board of Surgery. Dr. Lehman became director of the State Division of the American Society for the Control of Cancer in 1938 and two years later became Director of the Virginia Cancer Foundation. He served as President of the American Cancer Society in 1947-8 and, also in 1948, he was given the John Shelton Horsley memorial award

for his achievements in cancer education and prevention in Virginia. Dr. Lehman founded the McIntire Tumor Clinic at the University of Virginia and was a director of the clinic for many years. He was an active member of The Medical Society of Virginia, having joined in 1914, and served as chairman of the Cancer Committee for a number of terms. His wife and two children survive him.

**Dr. John Beattie,**

Widely known physician of the Tidewater area, died at his home at Virginia Beach, June 1st. He was born in Latakia, Syria, and was eighty-eight years of age. Dr. Beattie received his medical degree from the University of Pennsylvania in 1896. He practiced in Europe for several years before locating in Lebanon, Pennsylvania, and in 1918 he entered practice in Norfolk. Dr. Beattie retired from practice three years ago. He was a Life Member of The Medical Society of Virginia, having been a member for forty-four years. His wife and three children survive him.

**Dr. Thomas Franklin Jarratt,**

Jarratt, died May 22nd, at the age of seventy-six. He was a graduate of the Medical College of Virginia in 1904 and located in Jarratt following his graduation. Dr. Jarratt was prominent in civic affairs, having been a member of the Town Council, a charter member and past president of the Ruritan Club, and president of the Greater 301 Highway Association. He had been a member of The Medical Society of Virginia since 1904. His wife and two daughters survive him.

**Dr. Frederick Arthur Blesse,**

Henrico County Health Officer, died June 4th, following a heart attack several days before. He was sixty-five years of age and a retired Army brigadier-general. Dr. Blesse has served as director of Henrico County Health Department since 1950 and made his home in Richmond. His wife and five children survive him.

**Dr. MacLean**

On April 2, 1954, death removed from our midst one of the oldest and most venerable members of our profession.

Henry Stuart MacLean was born in Inverness, Scotland on October 23, 1873. During his boyhood the Mac-

Lean family moved to Brooklyn, N. Y. He received his degree of Doctor of Medicine from Long Island College Hospital in 1895, following which he interned at Brooklyn Hospital on the service of Dr. George R. Fowler. Upon completion of his training he came to Richmond where he practiced until 1934. He was on the staff of the Medical College of Virginia as professor of Pathology and Surgical Pathology until 1913. In 1912, together with the late Dr. Robert C. Bryan, he founded Grace Hospital which they owned and operated until 1929 when it was sold to its present owners, the Henry Franklin Corporation. In 1934 Dr. MacLean retired from active surgical practice in order to devote his full time to Virginia Electric & Power Company, with which he had been associated since 1902 in the capacity of Chief Medical Officer. He also served the Federal Reserve Bank of Richmond as Medical Adviser. Dr. MacLean was a member of the American College of Surgeons, the Industrial Medical Association, American Medical Association, Southern Surgical Society, The Medical Society of Virginia and the Richmond Academy of Medicine.

Stuart MacLean, the physician, was held in deservedly high esteem throughout his long life of fruitful activity. His skill as a physician and surgeon, his humanitarian interests and strict adherence to ethical practices are traits firm in the minds of those still living, both in and out of the profession, whose privilege it was to be called his friends, patients or colleagues. His character combined self confidence and dignity with a modesty and humility younger men, seeking guidance toward perfection, might imitate with profit. A pioneer in the ever growing important field of industrial medicine, Dr. MacLean's policies have gone far toward advancing understanding and cooperation between physicians in industrial practice and those in private practice. As Chief Medical Officer of Virginia Electric & Power Company for fifty-two years, he won the everlasting respect and devotion of employers, employees and affiliated physicians alike.

Stuart MacLean, the man, was a devoted husband and father, a sincere Christian who served his church faithfully as a Deacon and later an Elder since 1898, a true friend to all who sought his friendship. Dr. MacLean loved Virginia; he loved the Blue Ridge and the Alleghanies; he loved the dogwood and the redbud in the spring, and the colors of autumn. For over fifty years he fished the streams and rivers of Alleghany and Bath counties. His constant wish of the last few weeks of his life was that he might gain strength enough to go there one last time. He never did.

We who have had the privilege of his close association during the latter years of his life feel his loss most greatly. For a far too brief time, we have enjoyed and profited by the opportunity of having known him well. His sound judgment acquired through many full years of experience, a keen intellect, a ready, subtle sense of humor and a philosophy born of long observation combined to produce the man of his great stature. We shall truly miss this fine physician, wise counselor, firm critic, true friend and gentleman.

WHEREAS, the Academy wishes to recognize Stuart MacLean's great loss to the profession and the fine qualities which assembled themselves to make the physician and man that he was,

BE IT RESOLVED, THEREFORE, that this tribute to his memory be entered in the minutes of this meeting, and that a copy thereof be sent to the Virginia Medical Monthly for publication

BE IT FURTHER RESOLVED that a copy also be sent to Mrs. Annie Wood MacLean, his loyal and devoted wife who survives him.

MAYNARD R. EMLAW, M.D.

T. NEILL BARNETT, M.D.

THOMAS BEATH, M.D.

### Dr. Turman

Dr. Alexander Emmett Turman, beloved Richmond physician, died at his home on Monday, May 10, 1954.

He was born in Carroll County, Virginia, May 6, 1869, the son of James M. and Tabitha Gardner Turman. He was a graduate of the Medical College of Virginia in the class of 1893. He received post-graduate training in Vienna, Austria, as well as in New York and Chicago.

Dr. Turman began general practice in Virginia soon after this. His activities were not entirely confined to the medical world since he also showed great interest in civic and fraternal organizations.

In 1903 Dr. Turman became a member of this Academy and was a member until the time of his death. As many of you can attest, he faithfully attended not only the meetings of the Academy, but also others, state and national, as long as he was physically able to do so. In addition to being a member of the Richmond Academy of Medicine, he belonged to The Medical Society of Virginia, the Southern Medical Association, the Tri-State Medical Association, the American Medical Association, and the American Public Health Association. He was a member of the Temple Royal Arch Chapter # 32, Richmond Commandery # 2, Delcho Consistory of Richmond, Acca Temple of the Shrine Dove Lodge # 53, A F and A M Fulton Lodge # 193, A F and A M of Hillsville, Va., Order of the Odd Fellows, The Elks, Order of the Moose, First Unitarian Church and the Richmond Rotary Club.

Dr. Turman was twice married, and leaves a daughter, Miss Adele Turman by his first wife. His second wife died in 1941.

THEREFORE, BE IT RESOLVED that the Richmond Academy of Medicine hereby expresses its sense of deep feeling of sorrow and regret at the passing of Dr. Turman.

BE IT FURTHER RESOLVED that this resolution be spread upon the minutes of the Academy, a copy sent to his immediate family, and one to the Journal of The Medical Society of Virginia.

CHARLES L. OUTLAND, M.D., *Chairman*

ARTHUR S. BRINKLEY, M.D.

L. BENJAMIN SHEPPARD, M.D.





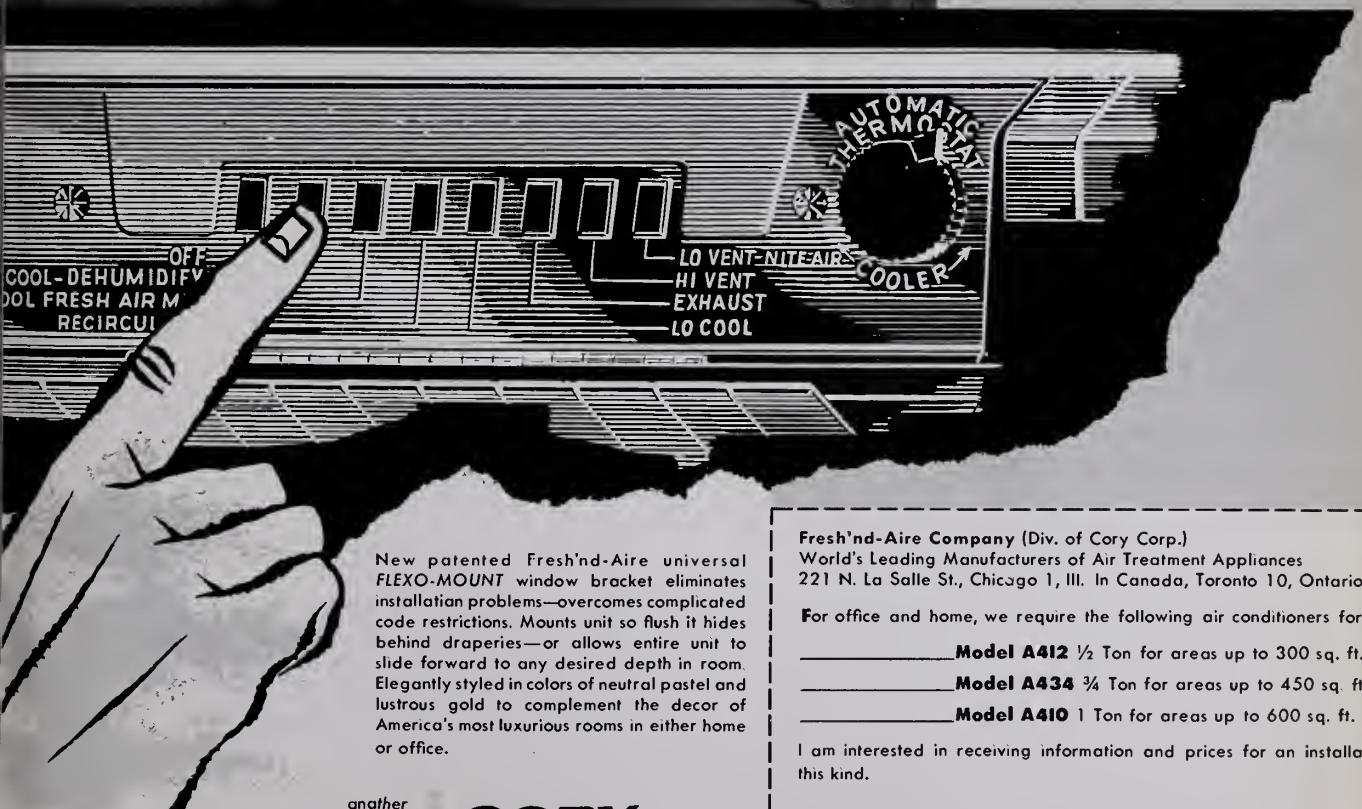
you owe it to yourself  
to find out about

**Fresh'nd-Aire's<sup>®</sup>**  
**new**

## completely automatic electromagnetic push-button all-weather air conditioner

It's FABULOUS! Just select the weather you want—push a button and you get instant, automatic control of both room temperature and air circulation. Exclusive Fresh'nd-Aire *Electromagnetic All-Weather Control* cools, dehumidifies, circulates, ventilates, filters, exhausts and heats\*. You enjoy perfect weather every day of the year.

*Automatic Thermostat included on all models—NO EXTRA CHARGE.*



New patented Fresh'nd-Aire universal FLEXO-MOUNT window bracket eliminates installation problems—overcomes complicated code restrictions. Mounts unit so flush it hides behind draperies—or allows entire unit to slide forward to any desired depth in room. Elegantly styled in colors of neutral pastel and lustrous gold to complement the decor of America's most luxurious rooms in either home or office.

another  
quality product of

**CORY**  
corporation

\*Heater optional on all models at slight extra cost.

Fresh'nd-Aire Company (Div. of Cory Corp.)  
World's Leading Manufacturers of Air Treatment Appliances  
221 N. La Salle St., Chicago 1, Ill. In Canada, Toronto 10, Ontario

For office and home, we require the following air conditioners for 1954

- \_\_\_\_\_ **Model A412** ½ Ton for areas up to 300 sq. ft.
- \_\_\_\_\_ **Model A434** ¾ Ton for areas up to 450 sq. ft.
- \_\_\_\_\_ **Model A410** 1 Ton for areas up to 600 sq. ft.

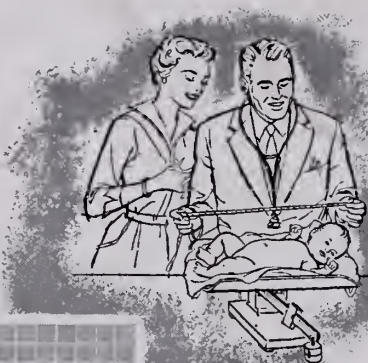
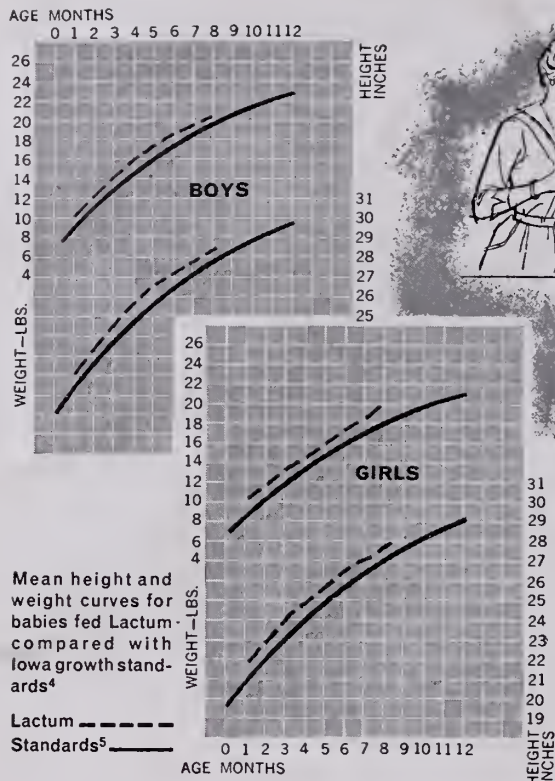
I am interested in receiving information and prices for an installation of this kind.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

PUSH THE BUTTON  
PERFECT WEATHER



## AMPLE PROTEIN FOR OPTIMAL GROWTH

### Essential to the NEW BASIC CONCEPT in infant feeding

Accumulating clinical studies are convincing evidence of the infant's need for generous amounts of protein for optimal tissue and motor development.<sup>1,2</sup>

Lactum supplies 16% of its calories as protein, providing an ample margin of safety over the Recommended Daily Allowance for infants. A typical 24-hour Lactum feeding for a 10-pound infant provides 20 Gm. of protein—25% more than the National Research Council's Recommended Daily Allowance.\* Babies fed Lactum® consistently show outstanding height-weight ratios (see charts).

The generous amounts of *natural milk protein* in Lactum contribute to an excellent level of satiety. Infants tend to have better dispositions and sleep well. Night feedings usually can be discontinued earlier.

As an added safety factor, Lactum contains sufficient added carbohydrate (Dextri-Maltose®) to spare protein and permit efficient fat metabolism.<sup>1,3</sup>

The natural nutrients of the whole milk in Lactum are not manipulated in any manner. Nothing is substituted. All vitamins and minerals are retained in optimal amounts. And Lactum formulas supply twice as much vitamin B<sub>6</sub> as breast milk.

Lactum feedings are easy to prepare. One part of Liquid Lactum to 1 part of water, or 1 level measure of Powdered Lactum to 2 ounces of water, makes a formula supplying 20 calories per fluid ounce.

(1) Jeans, P. C.: In A.M.A. Handbook of Nutrition, Ed. 2, Philadelphia, Blakiston, 1951, p. 275. (2) Albanese, A. A.: *Pediatr.* 8: 455, 1951. (3) Holt, L. E., Jr., and McIntosh, R.: In *Holt Pediatrics*, Ed. 12, New York, Appleton-Century-Crofts, Inc., 1953, pp. 175-178. (4) Frost, I. H., and Jackson, R. L.: *J. Pediatr.* 39: 585, 1951. (5) Jackson, R. L., and Kelly, H. G.: *J. Pediatr.* 27: 215, 1945.

\*Calculated on the basis of a daily allowance of 3.5 Gm. per Kg.



MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

**MEAD**

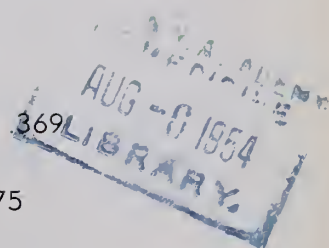


# VIRGINIA MEDICAL MONTHLY

## *Contents*

- Use and Abuse of Antibiotics, Erwin Neter . . . 355
- Emotional Factors in Ulcerative Colitis of Children,  
Douglas Powers and B. M. McKay . . . 363
- Management of Peripheral Vascular Disorders, Nathan Bloom . . . 369
- Rupture of the Descending Colon, Russell Buxton . . . 372
- The Treatment of Chronic Bronchitis, W. LeRoy Dunn . . . 375
- The Indications and Technique for Intermarginal Eyelid  
Adhesions (Tasorrhaphy), E. W. Perkins . . . 378
- Intestinal Obstruction of the Bowel in the Aged and the Young, M. J. W. White . . . 381
- Recurrent Hemorrhage Secondary to Ileal Diverticulum,  
Paxton Powers and Kemp Plummer . . . 383
- Incidence of Goitre in Southwest Virginia, J. T. Phillips, Jr. . . . 386
- Dr. William Baynham, of Virginia, L. Benjamin Sheppard . . . 388

(Continued on page 6)



SLEEP THAT MAKES THE DARKNESS BRIEF

## 'Seconal Sodium'

(Secobarbital Sodium, Lilly)

**rapid action, short duration — patient awakens refreshed**



In 1/2, 3/4, and 1 1/2-grain pulvules

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.



# "How many of these



## How many of these people need a doctor?

### *All of them?*

Most of them are feeling fine and want to stay that way. And that's exactly why they need a doctor. For the surest way to *stay* healthy is to get in the habit of consulting a doctor regularly.

A prompt report to your doctor of any real change in your physical condition may allow him to halt a disease before it becomes serious. A regular medical check-up may detect some illness before you are aware of it.

Copyright 1934—Parke, Davis & Company

And in treating and consulting with you through the years, your doctor builds valuable records on your physical assets and liabilities. He gets to know your emotional make-up. He can do more for you when he has an intimate understanding of you as a person.

Through your doctor you can take advantage of the vast resources of medical science and recent advances in treatment of many conditions.

Perhaps, at the moment, you don't have a family

physician. If not, start making inquiries *now*—don't wait for an emergency to force you into a frantic search for a doctor.

You may wish to consider several doctors before you pick the one who is "right" for you. Once you have made your selection, give him your complete confidence, as you would any other trusted member of your family circle. Remember, your doctor is the best "preventive medicine" your family can have.

**PARKE, DAVIS & COMPANY**

Research and Manufacturing Laboratories      Detroit 32, Michigan

*One of a series of messages on the importance of prompt and proper medical care, published by Parke, Davis & Company—makers of medicines prescribed by physicians and dispensed by pharmacists.*

# Virginia Medical Monthly

Vol. 81, No. 8  
WHOLE No. 1226

RICHMOND, VA., AUGUST, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## USE AND ABUSE OF ANTIBIOTICS\*

ERWIN NETER, M.D., F.A.P.H.A.,

Attending Bacteriologist, Children's Hospital, Assistant Professor of Pediatrics,  
and Assistant Professor of Bacteriology,  
University of Buffalo, School of Medicine,  
Buffalo, New York

This year we are celebrating the one-hundredth anniversary of the birth of the scientist who is justly regarded as the founder of modern chemotherapy. It was Paul Ehrlich who pursued the search for chemical compounds which are detrimental to pathogenic microbes and innocuous to the human host. Fundamental researches lead him to the discovery of arsphenamine, which, as you all know, was used for many years in the treatment of syphilis and other spirochetal infections. Ehrlich deserved the Nobel prize for this discovery, but, more than that, he deserved this honor for having established a new approach to the specific therapy of infectious diseases. His dreams and hopes have been fulfilled today as never before.

There is another anniversary we are celebrating this year. Twenty-five years ago this month, there was in press in the *British Journal of Experimental Pathology* a paper by Alexander Fleming in which this Nobel prize winner described the discovery of penicillin, a drug which, unhappily, remained practically unknown for a decade, when its clinical usefulness was demonstrated by two other Nobel prize winners, Florey and Chain. These fundamental studies opened the way to the discovery of numerous other similarly active and clinically useful drugs, the antibiotics.

Those of us who have been in medicine during the last two decades have witnessed the extraordinary advances made in the treatment and prophylaxis of infectious diseases that began with the introduction of the sulfonamides and were followed by the use of an ever increasing number of antibiotics. One cannot fail to realize how much this progress has revolutionized every phase and specialty of medicine.

Diseases which until 1935 were almost invariably

fatal, such as meningitis, subacute bacterial endocarditis, and many others, can be cured more often than not by the appropriate antibiotic. Whooping cough, which caused the death of 25% of infants under two years of age, is no longer the dreaded disease it was just a few years ago. Serious complications of certain infections have almost completely disappeared because of antibiotic treatment of the primary infection, as exemplified by the extraordinarily low incidence of empyema in cases of pneumonia and of mastoiditis in patients with otitis media. Specific agents at long last are available for the treatment of typhoid fever, tuberculosis, rickettsial diseases, including typhus fever, and many other maladies.

At the same time all of us must be painfully aware of the fact that we are still lacking chemotherapeutic or antibiotic agents which are curative in diseases caused by the true viruses, such as influenza, measles, poliomyelitis, encephalitis, infectious hepatitis, and many others. Furthermore, it has become clear that antibiotic therapy may result in certain undesirable side-effects. In the first place, we have to consider toxic effects of certain antibiotics. Secondly, patients may be, or may become, allergic to some of the antibiotic agents. Thirdly, antibiotics used for the treatment of certain infections may be responsible for the development of so-called super-infections, partly because the particular antibiotic is ineffective against the secondary pathogen and partly because the antibiotic may suppress certain normally present microorganisms, an event, which, in turn, may facilitate the multiplication of the secondary pathogen. Fourthly, antibiotics, particularly streptomycin, may contribute to the emergence, and thus to the dissemination, of antibiotic-resistant bacteria.

This morning, I shall select for discussion a few of the more important and more recent developments

\*Address presented before Virginia Academy of General Practice, Richmond, Virginia, May 7, 1954.



in the field of antibiotic therapy, fully aware that it is impossible to do justice in the limited time available to so important and large a subject.

#### SELECTION OF THE APPROPRIATE ANTIBIOTIC

One of the important problems facing the practitioner as well as the specialist in the treatment of various infections is that of the selection of the best anti-infective agent. It is true that the availability of the broad-spectrum antibiotics and of certain combinations of other antibiotics makes this decision relatively easy in many instances. On the other hand, it cannot be stressed enough that, for serious or potentially serious infections, at least, this decision rests largely on the proper etiological diagnosis of the infectious process. In many instances the practitioner can make the correct diagnosis on clinical grounds. Often, however, appropriate laboratory examinations are indispensable, in order to determine the etiological agent of an infectious disease. For example, bacteriological examination of the spinal fluid is necessary in order to ascertain whether meningitis is due to the meningococcus, influenza bacillus, streptococcus, or pneumococcus. Obviously, it is physically impossible to carry out bacteriological procedures in every patient with an infectious disease. On the other hand, it is up to the clinician to recognize the cases whose recovery depend upon early and definitive diagnosis and appropriate therapy, a challenge, indeed, to his diagnostic acumen.

The practitioner must be aware of the fact that meningitis in early infancy may be present in the absence of fever and classical meningeal signs and that it is better to do several spinal taps unnecessarily than to do one too late. Likewise, sepsis in the newborn and particularly in the premature infant may be present in the absence of an elevated temperature. The appearance of a few petechiae in the beginning of an infectious disease and in the absence of hematological disorders should suggest the possibility of a meningococcal infection; in such a case a delay of hours in diagnosis and treatment may profoundly influence the outcome of the disease.

Once the clinical and etiological diagnosis has been made, it is frequently possible without sensitivity tests to select the most effective chemotherapeutic regime on the basis of past experience. For instance, a diagnosis of meningococcal meningitis suggests as the best anti-infective agents sulfona-

mides and/or penicillin. If the meningitis is due to *Hemophilus influenzae*, chloromycetin or terramycin together with a sulfonamide compound are the drugs of choice. Again, if the infecting microorganism is a pneumococcus, very large doses of penicillin are required. The antibiotic therapy of choice in typhoid fever is chloromycetin; that in tuberculosis is a combination of streptomycin and isonicotinic acid derivatives; and that in rickettsial diseases one of the broad-spectrum antibiotics, aureomycin or terramycin. Numerous other examples of this type could be cited.

There are a number of infections caused by bacteria which vary in their sensitivity to various antibiotics from strain to strain and from year to year. In such instances we have to decide from case to case as to which is the best antibiotic. No better illustration of the changing pattern of sensitivity can be given than that of staphylococcal infections. Whereas in the beginning of the penicillin era the majority of strains of staphylococci proved to be sensitive to this antibiotic, at the present time 50% or more are highly resistant. Fortunately, for the treatment of penicillin-resistant staphylococcal infections a new antibiotic is now available, namely, erythromycin. Up to this time, most strains of staphylococci are susceptible to erythromycin, even strains which are resistant to many other clinically used antibiotics. Whether in due time a large percentage of staphylococci encountered in clinical infections will become resistant to erythromycin remains to be seen. Similar to staphylococci, various gram-negative bacilli, such as *Escherichia coli*, *Aerobacter aerogenes* and others, vary markedly from strain to strain in their sensitivity to different antibiotics. In these and many other instances the clinician may be aided by the results of an *in vitro* determination of the sensitivity of the infecting microorganism to various antibiotics.

#### LABORATORY DETERMINATION OF ANTIBIOTIC SENSITIVITY OF BACTERIA

From a practical point of view the *in vitro* determination of the sensitivity of various pathogenic bacteria is indicated whenever, on the basis of past experience, the particular type of microorganism is known to vary considerably in its susceptibility to various antibiotics from strain to strain. On the other hand, such determinations are not needed when it is known that the particular species is almost al-



ways susceptible to a given antibiotic. To illustrate: From a practical point of view, all strains of Group A hemolytic streptococci, pneumococci, and gonococci are sensitive to penicillin. Therefore, it is usually unnecessary for the clinician to request such tests on a routine basis and to add to the ever increasing load of diagnostic laboratories.

Two principle methods are available for the *in vitro* determination of bacterial susceptibility to antibiotics, namely, the tube dilution method and the disc method. With all due regard to the shortcomings of the disc method, this method gives valuable help to the clinician, provided that it is correctly done and properly interpreted. To my mind, this method can be readily carried out in the average hospital laboratory, but the results must not be interpreted quantitatively. It would be a serious mistake to consider one antibiotic superior to another one used in like concentration because the zone of inhibition is larger. So many factors complicate the results of this test that the laboratory should report only whether the strain is sensitive or resistant. If used in this fashion, this test can be of real value to the practicing physician. It must be stressed that the tube dilution method yields far more accurate results than the disc method. However, many laboratories lack the facilities for performing the tube dilution method on a routine basis.

#### NEWER ANTIBIOTICS

Among the more recently discovered antibiotics several have already proved their usefulness in clinical practice.

Erythromycin resembles penicillin in its spectrum of activity, inasmuch as it is effective against gram-positive bacteria and largely ineffectual against many gram-negative bacilli. Therefore, it is not a broad-spectrum antibiotic, such as the tetracyclines (aureomycin, terramycin, achromycin or tetracycline). Strains of staphylococci which are resistant to penicillin are very frequently susceptible to erythromycin. Thus, this antibiotic has its greatest usefulness in penicillin-resistant staphylococcal infections. Recently, together with Dr. Selkirk, we had the opportunity to use the injectable erythromycin in an outbreak of impetigo among newborn infants. The infection, which had failed to respond to penicillin, cleared up promptly and the outbreak terminated. Similarly, two patients suffering from staphylococcal enteritis responded to this antibiotic.

Tetracycline, which is the basic part of both aureomycin and terramycin, has been shown to have a similar spectrum of activity as the latter drugs, but gastro-intestinal disturbances are encountered less frequently. At the present time, tetracycline, manufactured under various names, such as achromycin and tetracycline, may be used whenever either aureomycin or terramycin are indicated.

Neomycin, which was discovered a few years ago, appears to be of particular value in the preparation of patients for gastro-intestinal surgery and in the treatment of certain bacterial infections of the intestinal tract, such as infectious gastro-enteritis of infants associated with certain serogroups of *Escherichia coli*.

Great strides forward in the treatment of infectious diseases have been made recently not only with the discovery of new antibiotics but also by distinct improvements of previously known compounds. Penicillin has become readily available for oral administration. The physician must keep in mind that from 4 to 5 times as much penicillin should be given orally than is required for parenteral administration. The introduction of longer lasting penicillin preparations has made it possible to reduce the number of injections for the patients and to save time for physicians and nurses alike. Preparations, such as bicillin, after a single injection produce detectable blood levels for several days. Combinations of aqueous penicillin, procaine penicillin, and bicillin give high levels almost instantaneously and maintain detectable levels for a number of days. Thus, the physician has numerous penicillin regimes at his disposal. The choice depends, first of all, upon the type and severity of infection, and is influenced by such factors as to whether the patient is hospitalized, in bed at home, or ambulatory. In this connection it cannot be stressed enough that a given amount of penicillin may be entirely adequate for treatment of scarlet fever or pneumococcal pneumonia and yet be quite insufficient for the treatment of streptococcal or pneumococcal meningitis. Too often have we seen patients suffering from meningitis who were unsuccessfully treated with inadequate amounts of penicillin and promptly responded to this antibiotic in adequate dosage. In evaluating the status of patients suffering from various infections it is not only necessary to know whether antibiotics had been used during the earlier stages of the disease, but it is imperative to learn about the dosage,

schedule, and forms of preparations previously administered. An adequate evaluation is not possible if the history states only that, let us say, three injections of penicillin had been given: three injections of aqueous penicillin given over a seven-day period have an entirely different connotation than three injections of bicillin administered during the same period.

Progress is being made in the search for intramuscularly injectable broad-spectrum antibiotics. For example, terramycin is now available in such a form. Obviously, this method of administration has definite advantages over the intravenous route. Studies on intramuscularly injectable chloromycetin and erythromycin are in progress.

#### ANTIBIOTIC COMBINATIONS

A few comments are in order regarding the subject of the combined use of different antibiotics. Experimentally it has been shown, both in the test tube and in animals, that combination of two drugs, as compared to a single antibiotic, may have three different types of effects: (1) The combination may be additive. In this case the combination is just as effective as equivalent amounts of each antibiotic used. (2) The combination may be synergistic, being substantially more effective than either drug alone in equivalent amounts. (3) The combination may be antagonistic, being substantially less effective than either compound used alone. In these experiments it could be shown, largely through the investigations of Jawetz, that combination of two bactericidal drugs, penicillin and streptomycin, are frequently synergistic and that combination of a bactericidal and bacteriostatic drug, such as penicillin and aureomycin, may be antagonistic.

Although antibiotic antagonism has been demonstrated clearly in laboratory experiments, there is little evidence that it is of great importance in clinical practice. So many thousands of patients have been treated successfully by numerous combinations that deficiencies of this form of therapy should have come to light long ago. However, there is at least one instance in which this antagonism has been observed clinically, namely, in the treatment of pneumococcal meningitis. In this particular disease treatment with penicillin alone yielded results far more favorable than therapy with a combination of penicillin and aureomycin.

Combinations of antibiotics and of antibiotics and

sulfonamides are clinically indicated under the following conditions:

(1) Such combinations are recommended, whenever synergistic effects may be anticipated. This is particularly so in the treatment of tuberculosis. It has been shown that combinations of streptomycin and PAS or of streptomycin and isonicotinic acid derivatives yield better results than streptomycin alone. This is probably due to the fact that the combined use of two anti-tuberculous drugs markedly delays or entirely prevents the emergence of drug-resistant tubercle bacilli. Recent evidence indicates that in sub-acute bacterial endocarditis, too, combined treatment with penicillin and streptomycin is superior to penicillin alone.

(2) Combination therapy is also indicated in infections caused by two or more microorganisms, inasmuch as one single antibiotic may not be effective against all pathogens present. As an example, peritonitis following appendicitis may be cited.

(3) Combinations of selected antibiotics may have to be used in bacterial infections in which the causative agent or agents have not been determined at the time that specific therapy is initiated. For example, penicillin and chloromycetin or penicillin, sulfadiazine, and chloromycetin may be given to a patient suffering from purulent meningitis under these conditions. Every effort should be made to determine the etiological agent of this and other serious infections, and, when the bacteriological diagnosis has been made, drugs no longer indicated should be discontinued.

#### ANTIBIOTIC RESISTANCE OF BACTERIA

It is well known that none of the antibiotics are effective against all microorganisms. The term spectrum of activity refers to the groups of microorganisms which are susceptible to a particular antibiotic. This innate resistance of certain bacteria to certain antibiotics depends upon the physiological characteristics of the microorganisms, namely, the growth requirements and enzymatic activities which are necessary for reproduction or survival. If an antibiotic interferes with one of these essential functions, it will inhibit the growth or even produce death. If, on the other hand, an antibiotic does not interfere with such an essential function, the microorganism will be resistant to its action. It should be stressed that the effects of antibiotics may be either direct or indirect and that extensive research is being

carried out in order to elucidate the modes of action of antibiotics. Results from such studies may lead to the discovery of new chemotherapeutic agents and may yield further insight into microbial physiology.

In addition to this innate resistance of various species of bacteria, strains belonging to one and the same species may be either resistant or susceptible to a given antibiotic. Such resistance may develop if the particular strain has an enzyme which interferes with the antibiotic. Certain strains of staphylococci, for example, are resistant to penicillin because of the production of penicillinase, an enzyme which destroys the antibiotic. Alternatively, strains may become resistant to a given antibiotic because they are capable of by-passing its detrimental effects. There can be no question that the development of resistance to certain antibiotics is frequently the result of mutation and selection. For example, as streptomycin-susceptible tubercle bacilli multiply, one mutant may arise which is streptomycin-resistant. Such mutations occur at random and at certain rates during multiplication, even in the absence of the antibiotic. As a result, among 100,000,000 bacterial cells all but one are susceptible to streptomycin. If this population is exposed to streptomycin, either in the test tube or in the animal host, all susceptible bacterial cells may be killed, but the lone mutant will survive. This surviving mutant in due time will have given rise to millions and millions of streptomycin-resistant tubercle bacilli. The possibility exists that developments of resistance may also take place as a result of an adaptative process in the bacterial cells during exposure to a particular antibiotic.

The emergence of drug-resistant bacterial cells in patients has considerable clinical importance. This problem is particularly serious in the case of streptomycin. If treatment with this antibiotic of patients suffering from urinary tract and other infections caused by gram-negative bacilli is not successful within a period of approximately 5 to 10 days, the possibility must be considered that these gram-negative bacilli may then have become resistant to streptomycin. Under these conditions it may be futile to continue streptomycin therapy; rather, the physician should consider the use of another antibiotic to which the selected mutants are still susceptible. The physician should keep in mind that streptomycin-resistant mutants may be many thousand times more resistant than the original parent strain and

that increasing the dosage of the drug will be of little or no avail.

The emergence of streptomycin-resistant tubercle bacilli in patients undergoing streptomycin treatment has been demonstrated on numerous occasions. As mentioned a moment ago, the simultaneous use of a second anti-tuberculous drug delays or prevents this occurrence, and it is precisely for this reason that, whenever specific therapy is indicated, combined anti-tuberculous treatment is preferred.

Today we encounter penicillin-resistant staphylococci in human infections far more frequently than 10 years ago. This changing pattern is probably due to the widespread use of this antibiotic. On the other hand, penicillin-resistance has not become a clinical problem in infections due to hemolytic streptococci of Group A, pneumococci, gonococci, and in syphilis. The reasons for the different behaviour of various bacterial species remain to be elucidated in the future.

Evidence has been presented that, with the widespread use of the tetracyclines, namely, terramycin and aureomycin, certain human pathogens have become somewhat more resistant than they were at the time that these antibiotics became generally available.

#### LIMITATIONS OF ANTIBIOTIC THERAPY

With the extraordinary advances resulting from antibiotic therapy in mind, one should not make the serious error of forgetting other forms of treatment. It is not necessary to go into details and it may suffice to illustrate this important point with one example. Antibiotic therapy frequently fails in patients with chronic or recurrent infections of the urinary tract, unless the underlying anatomical or physiological condition resulting in stasis is corrected.

#### PROPHYLACTIC USE OF ANTIBIOTICS

Antibiotics have been used with extraordinary success not only in the treatment of many infectious diseases, but are valuable also in the prophylaxis of certain maladies. Early and adequate treatment of pneumonia prevents empyema; antibiotic therapy of otitis media prevents mastoiditis, meningitis, and brain abscess; early treatment of osteomyelitis prevents complications requiring surgery. And, antibiotics have been used with success in the prevention of venereal disease following exposure to infected individuals. Another, to my mind, most important application of antibiotic prophylaxis is that of rheuma-



tic fever. It has been established beyond doubt that an infection with hemolytic streptococcus usually precedes an attack of rheumatic fever and serves in an as yet unexplained way as trigger mechanism; furthermore, a patient who has had one attack of this disease is prone to have other episodes, particularly during the first few years following recovery. Second and third attacks of rheumatic fever can be prevented frequently. Any patient who has had one attack of rheumatic fever should be given either sulfonamides or penicillin as a prophylactic measure against hemolytic streptococcal infection and therefore against another attack of rheumatic fever. Sulfonamides are cheaper than penicillin, but penicillin appears to be superior to the sulfonamides. Penicillin may be given by mouth or in the form of a long-lasting injectable preparation. Such a regime should be carried out on a year-round basis in areas where streptococcal infections are not uncommon even in the summer. Together with Drs. Lambert and Webster we have used bicillin (200,000 U) by mouth twice a day in a group of rheumatic patients and have not encountered a recurrent attack of this disease. This prophylaxis should be started as soon as rheumatic fever has been recognized. It should be stressed that larger doses of penicillin may be required to eliminate hemolytic streptococci from the upper respiratory tract than to prevent their appearance. For this reason, we treat patients with rheumatic fever who harbor hemolytic streptococci with full doses of penicillin and follow with oral bicillin as mentioned a moment ago. The prophylactic regime should be carried out for at least 5 years following an attack of rheumatic fever or until puberty. Another, though less, effective way of preventing this malady consists in treatment of all acute respiratory infections in individuals who have had rheumatic fever within 5 years. This method is distinctly inferior to penicillin prophylaxis, because so often infection with hemolytic streptococci does not produce symptoms of a sufficient degree to induce the patient to seek medical advice.

Very recently it has been shown, largely through the studies of Dr. Rammelkamp, that infection with but a few of the 40 types of Group A hemolytic streptococci are frequently complicated by glomerulonephritis. If an outbreak with one of these types, particularly type 12, should be present in a community, prophylactic administration of penicillin may prevent this kidney disease. According to Dr. Denny

(personal communication) early treatment of such a streptococcal infection, too, may lower the incidence of glomerulonephritis.

Penicillin has proved to be of real value also in the prevention of subacute bacterial endocarditis. It is known that this formerly almost invariably fatal disease develops in patients with congenital heart disease and in individuals who had rheumatic fever with cardiac involvement. Operative procedures in the mouth, including tonsillectomy and tooth extraction, may initiate this infection by *Streptococcus viridans*. Whenever such surgical procedures are contemplated on a patient with one of the above mentioned heart conditions, it is advisable to administer penicillin prior and subsequent to surgery. Very recently, we have seen subacute bacterial endocarditis following tooth extraction in a patient who had not been given the benefit of this prophylaxis. It is the family physician who has the greatest opportunity to make sure that these measures are taken in an individual who may be a candidate for subacute bacterial endocarditis. Studies are needed to determine the most effective regime for the prevention of this disease caused by penicillin-resistant bacteria.

#### SIDE-EFFECTS OF ANTIBIOTIC THERAPY

A few comments may now be made regarding some of the side-effects of antibiotic therapy. Let us consider first the primary toxicity of antibiotics.

Fleming was not only the genius who observed, as many others had done before him, the phenomenon of antibiosis and undertook the basic research that lead to the discovery of penicillin, but he was also a very lucky man, since the compound he discovered is extraordinary in its efficacy and lack of toxicity. If we keep in mind that less than 100,000 units of penicillin a day was used with success in the early days of penicillin therapy and that today as much as 50,000,000 units a day are used without encountering toxicity, we realize that penicillin is fundamentally devoid of primary toxicity. There is no antibiotic or chemotherapeutic agent which may be given safely in doses 100 to 500 times larger than the minimal effective dose. Certainly, no one would recommend 100 grams of streptomycin a day or 100 grams of aureomycin or terramycin!

So far as streptomycin and dihydro-streptomycin are concerned, toxic effects, resulting in deafness, can be largely prevented if dihydro-streptomycin is used

for short-range treatment, up to three months, and streptomycin for long-range treatment, or if a combination of these compounds (one-half of the indicated dose of each) is employed.

At the present time chloramphenicol is used in a few infections only because of the occurrence of blood dyscrasia. There can be little doubt that only a very small percentage (1 in 40,000) of individuals who have been treated with this highly effective antibiotic have developed this complication. The reason why this drug appears to have this effect in so few instances and be devoid of toxicity in almost all other individuals is still a mystery. Chloromycetin remains the drug of choice in typhoid fever, and we continue using it with success in meningitis due to *Hemophilus influenzae* and certain other bacterial infections of children which do not respond readily to other antibiotics. We have employed, without serious side-effects, the injectable form of chloromycetin in more than 150 infants and children.

Allergic reactions represent a second type of undesirable side-effects of antibiotic therapy. It must be stressed that the indiscriminate use of penicillin and other antibiotics may result in undue sensitization of individuals who later may be in dire need of these antibiotics. Should a patient be allergic to penicillin G, and require penicillin, it is advisable to use penicillin O, since some patients are not sensitive to the latter preparation, although they are to the former.

Thirdly, the possibility exists that certain forms of vitamin deficiency may develop following prolonged administration of sulfonamides and antibiotics.

There remains to be discussed yet another side-effect of antibiotic therapy, namely, superinfections.

#### SUPERINFECTIONS COMPLICATING ANTIBIOTIC THERAPY

It has been observed that following the prophylactic or therapeutic use of a given antibiotic an infection may develop which was not present at the initiation of therapy. We do not as yet know all the factors that contribute to this complication. However, it is clear that the antibiotic in use cannot be effective against the microbe causing the superinfection and that the latter potentially pathogenic microorganism must have been present in the patient or was introduced from without. For example, moni-

liasis may become clinically manifest as a superinfection of the mouth, rectum, vagina, or respiratory tract. It should be emphasized, however, that the demonstration in the laboratory of monilia in specimens of such patients does by no means always indicate that their presence is associated with clinical infection.

Superinfection in infants may be due to a variety of gram-negative bacilli and, in collaboration with Drs. Rubin, Haffner and McCurdy, we have observed the emergence of a gram-negative, bacillary flora in infants during penicillin therapy; the emergence of this flora not rarely was associated with exacerbation of the original respiratory disease and in four cases contributed to the fatal outcome. Interestingly, this change in the bacterial flora was less frequently encountered when broad-spectrum antibiotics were used alone. It must be stressed that these observations were made in a hospital environment, and it is likely that various gram-negative organisms, including *Bacillus pyocyaneus*, *Bacillus proteus*, and others, are present in larger numbers in such an environment than elsewhere. In fact, the problem of cross-infection has become again a serious one, at least, in some hospital wards. Furthermore, we must realize that premature babies and young infants as well as patients undergoing treatment with ACTH or cortisone may be more susceptible than other individuals to infection in general and therefore also to superinfection.

Another example of superinfection complicating antibiotic therapy is that of severe staphylococcal enteritis. Our pathologist, Dr. Terplan, had the unhappy opportunity of studying and reporting 11 such cases. Most tragically, antibiotics had been administered largely for prophylactic purposes prior to surgery. The evidence presented indicates that huge numbers of staphylococci were present in the intestinal tract and apparently were responsible for this fulminating disease. Since his report was published, Dr. Terplan has studied other cases of this type and we have observed both fatal and non-fatal instances in children. Similar experiences have been encountered elsewhere. Although a final explanation of the etiology and pathogenesis of this syndrome cannot be offered at this time, it seems likely that the effects of certain antibiotics on the normal flora may have facilitated the extraordinarily profuse growth of the staphylococcus, and it is conceivable

that staphylococcal toxin is responsible for the development of enteritis and profound shock.

It should be stressed that, if diarrhea develops during or following antibiotic therapy, every effort should be made to determine whether or not staphylococci can be incriminated. Information on this point may be obtained by means of microscopic examination of fecal material. Normally, gram-negative bacilli predominate. In the above cases, however, gram-positive cocci in clusters are seen almost exclusively. Such an examination takes but a few minutes, and the laboratory should inform the clinician of its findings at once. Cultural examination also should be carried out. In these cases *Bacterium coli* is either entirely absent or present only in small numbers. Since these staphylococci do not grow on the culture media usually employed in the examination of fecal specimens, it is imperative that the diagnostic laboratory of today use blood agar in conjunction with the other culture media. Should this complication occur, it must be recognized as soon as possible. Since the strains of staphylococci encountered in this condition are resistant to the antibiotic which aided in their emergence, it seems reasonable to advise the physician to discontinue the particular antibiotic and to employ the one, that, more often than not, is effective against this microorganism, namely, erythromycin.

#### USE AND ABUSE OF ANTIBIOTICS

There can be little question that antibiotics are often used without appropriate indications. The physician frequently finds himself in the following dilemma: If he prescribes an antibiotic for a minor, self-limited infection or for a disease which is known not to respond to this or any other antibiotic, he may regret this decision, particularly if the patient

develops an allergic reaction or another side-effect. On the other hand, he will equally regret his decision not to have used an appropriate antibiotic, if the patient develops a preventable bacterial complication. Often it is difficult or even impossible to determine in the earliest stage of an infectious process whether the disease is mild and self-limited or will develop into a more serious malady. If such information were at hand with any degree of accuracy, the physician would be confronted with these problems far less often than he is today. The physician's position may be even more difficult if, as is not rarely the case, the patient requests treatment with antibiotics. Such pressure is readily understandable in view of the facts that the modern antibiotics have saved untold numbers of lives and have proved to be beneficial in so many diseases and because these advances in modern medicine have been justifiably brought to the public's attention. Perhaps some of the reports on these "wonder drugs" have created among the laity an exaggerated impression of their value without an understanding of their limitations. The physician's position can be made easier if all reports on the extraordinary advances made in medicine are presented in a clear, understandable, and objective way to the laity by competent individuals. Omissions of important facts can create erroneous opinions and impressions just as readily as a factually incorrect report. I am convinced that the public deserves to be kept abreast of advances in the field of medicine and of science in general. It behooves all of us to help in this endeavor, so that we may have an enlightened public, do not create false hopes and impressions, and thereby maintain and even improve the confidence of the public in the medical profession.



## EMOTIONAL FACTORS IN ULCERATIVE COLITIS OF CHILDREN

DOUGLAS POWERS, M.D.,

and

B. M. MCKAY, M.D.,

University of Virginia Hospital,  
Charlottesville, Virginia

That emotional tensions can have a profound influence on the function of the gastro-intestinal tract long has been known. Murray<sup>1</sup> in 1930 was one of the first to suggest that psychological factors play a role in the etiology of ulcerative colitis. Since that time many other investigators have corroborated his original observations. In 1939, White, Cebb, and Jones<sup>2</sup> concluded that mucous colitis is a physiological disorder of the colon brought about through the action of the parasympathetic nervous system and that the commonest source of this overstimulation is emotional tension. Wittkower<sup>3</sup>, in 1938, reported a study of forty cases, showing that in thirty-seven of these cases psychiatric abnormalities were present before the onset of symptoms. Certain personality features such as over-conscientiousness, rigidity, dependence upon the opinion of others, and extreme sensitivity seem to be characteristic of these persons with ulcerative colitis. Many of the cases appear to have been precipitated by some severe traumatic, emotional experience.

An interesting and valuable experimental work was carried out by Grace, Wolf, and Wolff<sup>4</sup>, utilizing four patients who had fistulae of the colon. Their conclusions were that feeling states characterized by anger and resentment are associated with hyperfunction of the colon, and that this hyperfunction is manifested by hyperemia, engorgement, hypermotility, and hypersecretion of mucus and of the enzyme lysozyme. They considered that the hyperfunction of the colon resulted in an increased fragility of the colonic mucosa, and noted that during periods of anger and resentment parts of the colon resembled the colon after administration of methacholine chloride. This observation is of interest in view of the work done by Wener and Simon<sup>5</sup> who produced ulcerative colitis in animals by the prolonged administration of methacholine chloride. Further, these investigators noted that sustained feelings of

anger and resentment associated with sustained hyperfunction of the colon resulted in submucosal bleeding and ulceration.

Historically, Helmholtz<sup>6</sup> was the first to report the condition of ulcerative colitis in children, describing five cases in 1923. This was followed by reports from several other authors, but no mention of emotional factors appeared in the literature until 1930 when Murray<sup>7</sup> called attention to this possibility. He pointed out the close relationship between emotional trauma and exacerbations in this illness. He described one case of a moderately "introspective" thirteen-year-old girl in whom improved mental hygiene seemed to have been responsible for a remission in the disease after all other methods were unsuccessful. His assumption was that through the autonomic nervous system alterations in the secretions and the tissues occurred which brought about the extensive ulceration in the colon. In 1935 Brust and Bargaen<sup>8</sup> noted the similarities between the disease in children and adults but were of the opinion that when children are affected the illness is prone to be more severe and that the outcome is more likely to be fatal, and that responses of the children to treatment are less satisfactory than those of adults. Bargaen and Helmholtz<sup>9</sup>, in 1940, reported the life histories of ninety-five children with chronic ulcerative colitis and stated that the condition is not so rare during infancy and childhood, that is, prior to the sixteenth year of life, as is generally believed. In their group of eight hundred seventy-one patients it was found that ninety-five of them (10.9 per cent) were afflicted with chronic ulcerative colitis in childhood.

Groen and Bastiaans<sup>10</sup>, in 1951, reported a series of thirty-five cases of ulcerative colitis, twenty-nine of which were treated almost exclusively by supportive forms of psychotherapy, the patients being given constant sympathy, protection, and reassurance, and in addition to working with the patients an attempt was made to improve their social conditions

\*From the Departments of Pediatrics, and Neurology and Psychiatry, University of Virginia School of Medicine, Charlottesville, Va., in October 1953.

and to alter the attitudes of parents and of other significant persons in the environment. Their results compared favorably with those of other forms of treatment.

Since Murray's reference to probable psychogenic factors there has been a gradual recognition of certain personality characteristics associated with persons who have ulcerative colitis. Sperling<sup>11</sup> describes these children as being in a state of permanent frustration which results in unconscious rage with an urgency for immediate discharge. Even slight additional frustrations, such as medical procedures and dietary restrictions provoked exaggerated responses. She says that psychoanalysis is difficult in these cases and that treatment involves not only the child but must be extended to the family, particularly the mother.

Prugh<sup>12</sup>, in 1951, reported on sixteen patients ranging from four years to nineteen years of age and described these children as passive, rigid, and dependent on parent figures, most often the mother. They were socially inhibited, narcissistic, and emotionally immature; and they showed compulsive needs to conform in an exaggerated manner to social dictates. The common denominator in these personalities appeared to be their relative inability to express effectively or in a balanced way strong feelings of anger or resentment, particularly in relation to parents or other figures of authority. The parents were described as being rigid, over-indulgent, and often inconsistent in their relation to the child, and this was especially applicable to the mother. It was thought that such parental attitudes led to overwhelming domination of the child, this domination being motivated by the parents' own unconscious emotional needs.

The interactions between parent and child appear to have started very early and are accentuated when habit training is started. At such times the child is faced with two possibilities, that of complying with the parent's desires and thereby receiving approval, or of not complying and receiving disapproval. The child with ulcerative colitis appears to have succumbed to the demands made on him and thus given up his right to self-assertion and self-expression; and at the same time he has experienced a strong feeling of rebellion toward the authority responsible for enforcing these excessive and unrealistic encroachments on his rights as a person.

The following cases are presented inasmuch as they

show certain of the personality qualities discussed above.

CASE NO. 1: This seven-year-old white girl was admitted to this hospital for the first time early in 1953. She had been in good health until three weeks prior to admission when she rather suddenly developed a profuse diarrhea characterized by frequent watery, bloody, mucoid stools. She was hospitalized elsewhere and treated with penicillin, sulfa preparations, and streptomycin. A barium enema showed nothing but evidence of spasm, and proctoscopic examination revealed a hyperemic mucosa and what the operator thought were early ulcers. The diarrhea subsided somewhat but immediately resumed when she reached home following discharge from the hospital. She was referred here for further study.

Physical examination revealed a thin child who was well-developed but who appeared acutely ill. Temperature was normal, respirations twenty-two, and blood pressure was normal. She was severely dehydrated but otherwise the physical examination was negative.

Admission laboratory studies were as follows: urinalysis normal; RBC 4.1; WBC 7,600; differential showed a marked shift to the left with toxic granulation being present on the smear; hemoglobin thirteen grams. The tuberculin test and the serology were negative. Repeated stool cultures were negative. Stool routine showed a four plus benzidine, much mucus, and innumerable pus cells.

It was thought that the child probably had an infectious enteritis. She was fed intravenously for two days and was started on Terramycin. Improvement was prompt and at the end of forty-eight hours she was started on oral feedings and tolerated them well. The diarrhea ceased, and the child appeared to be well. She was discharged on the ninth hospital day and was to be followed by her local physician. The agglutinations for *Brucella abortus* were 1:40 and for *Shigella flexner* 1:8; a repeat of these tests were advised.

The possibility of chronic ulcerative colitis was considered, but the diagnosis was deferred because of her prompt response to therapy.

The second admission was one week following her discharge from the first admission, and the complaints were the same. At the time of discharge she was having one or two well-formed bowel movements a day. Immediately upon reaching home she complained of cramping lower abdominal pain, and the

diarrhea stated. The frequency ranged from twelve to twenty movements each day, and there was no associated nausea, vomiting, chills or fever. Apparently her appetite and fluid intake had been adequate.

Physical examination was not remarkable.

Laboratory work revealed a normal hemoglobin; WBC 11,620 with a moderate shift to the left on differential; urine negative except for two to ten WBC per high power field with rare clumps. Stools on admission were watery. No gross blood was seen, but there was a three plus benzidine, three to five WBC, and ten to thirty RBC; no starch, increased fat, or parasites were seen. Repeated stool cultures were negative for typhoid, paratyphoid, and amebae. Agglutinations for typhoid, paratyphoid, and *Shigella* were all negative.

A proctoscopic examination revealed hyperemic areas with some ulcers which were bleeding. Biopsy of the ulcers showed long-standing sub-acute colitis with small points of ulceration.

The child was placed on a soft diet but was given no medication; and the diarrhea subsided within a few days, the stools being well formed.

The patient was given the Wechsler Intelligence Scale for Children and obtained an I. Q. of 114, which is high average. The Verbal Scale I. Q. was 104, and the Performance Scale I. Q. was 122. This large discrepancy of eighteen points between the verbal and performance I. Q. suggests emotional difficulties which might be impairing the verbal functioning. It was noted that she seemed to lack confidence in herself and would rather say that she did not know an answer than to attempt one. The overall impression on the Rorschach study was of a very constricted child who repressed her spontaneity and normal childish impulsivity. She gave several responses which reflected her ability to think with conformity and to share in group concepts, and she appeared to have good intellectual control and the ability to respond to common environmental stimuli. She was unable to incorporate color into her responses which suggested emotional constriction and an overly-guarded attitude toward emotional expression. There were few of the animal movement responses normal in children which suggested a denial or repression of her basic needs and drives, resulting in a lack of spontaneity. It was observed that children who show this constriction frequently have felt pressure to conform and to grow up in an at-

tempt to abide by the wishes of adults, thereby denying their emotional spontaneity and immature impulses. The child did rather poorly with cards four and seven which many consider to be cards relating to parental figures. Her difficulty with these cards probably reflects anxiety in her relationship with the parents.

The little girl was seen in play therapy sessions during this hospitalization and was returned for three sessions following discharge. The first visit was a stormy one in that she was crying at the time the nurse brought her to the playroom, and she continued crying for several minutes saying that her mother was leaving the hospital and that she wanted to see her before she left for home. This seemed to be a valid request, and the patient was allowed to return to the ward. The next time she came into the playroom she again was crying very loudly and saying with considerable hostility that she did not want to go to the playroom and that she wanted to return to the ward. This behavior continued for most of the hour, and she announced that she would continue crying until she was allowed to return to the ward. Near the end of the session she ceased crying, however, and sat fairly calmly in a chair but made no attempt to play with any of the toys. The remainder of the time that she came to the playroom while in the hospital she did not cry but superficially gave a pleasing, docile appearance. She expressed little interest in any of the toys, but made some crayon drawings. On the first visit after her discharge from the hospital she again cried for a few minutes, but after the mother left the playroom she became calmer and talked more freely. There was preoccupation with the frequent stools, which had started again almost immediately after she was discharged from the hospital. Again there was no interest in the toys, but she made a crayon drawing of a house, as she had on a previous occasion. At all times when the family returned the child for play therapy she was dressed extremely meticulously and very immaculately. Each time she would come in clinging to the mother and would show reluctance to leaving the mother and cry briefly, but when the mother would leave she would become more cheerful and discard some of this dependent, clinging attitude which she always expressed when in the presence of the mother. If the conversation was anything other than of a superficial nature, the child was evasive or would not talk at all.



The mother's first interview was with a psychiatric social worker, and she responded with tremendous hostility, relating that she had been criticized for the manner in which she had reared her daughter. Following this the mother was overtly hostile to the personnel on the ward and to the physicians. The father did not seem to be particularly upset, but he said very little and always seemed to play a passive role in the family. He appeared to have some insight into the emotional factors involved. Although the girl was returned on three occasions for play therapy sessions, at which time the mother was likewise interviewed, always there seemed to be much resentment on the part of the mother because she was asked to return the child. She complained frequently, and often in front of the child, that it was interfering with her work, that it was a lot of foolishness, and that the neighbors also thought she was not doing the right thing for her child.

The mother frequently remarked that she had been brought up in the same manner as she was bringing up her daughter and that she did not have ulcerative colitis. She was reared under rather strict, stern conditions and thought it was good for her child also. This little girl was not permitted to play with other children, if the play involved their getting dirt on the clothes or if the play was rough in nature. The parents were advised to allow the girl to continue school after discharge from the hospital, but this was not done. Both parents worked in the same place, on different shifts, but the mother did not return to work for a couple of weeks. However, when she did return to work the girl was left with various relatives for an hour or two each day since part of the time that the parents were away from home coincided. The child continued to sleep in the same room as her parents. In general the mother continued her possessive, dominating and controlling attitude toward the child. A third hospitalization was advised, but apparently they decided to seek help elsewhere.

CASE NO. 2: This nine-year-old white boy was admitted with the complaint of "ulcerative colitis". He had been in good physical health until four years prior to this admission when he developed signs that were suggestive of rheumatic fever. The diagnosis in another hospital at that time was arthritis. Two years before this admission he began to have some diarrhea, the stools containing blood and mucus.

He returned to the same hospital where he had an excellent and exhaustive work-up with a diagnosis of ulcerative colitis. He improved following psychotherapy and had been doing well until about four months before this admission, at which time he experienced a return of all of the original symptoms referable to the gastro-intestinal system.

The physical examination revealed a quiet, well-developed, slightly malnourished child who was cooperative and who was very suspicious of the examinations. He was negativistic and seemed to be very intelligent. Except for the mild malnutrition the physical examination was not significant.

The plan was to repeat all of the investigative procedures; but because of absolute refusal of cooperation and because he had been studied thoroughly in the other hospital, it was thought that a repeat work-up would be more of a psychic shock to him than it would be of value at the present time.

Repeated urinalyses were negative. Stools passed during the first part of his hospitalization were liquid and contained large amounts of mucus and many white blood cells. Repeated stool examinations for parasites were negative. Routine agglutinations for typhoid, paratyphoid A and B, Shiga; Sonni, and Flexner were negative. Wassermann and Kahn reactions were negative. Hemoglobin was thirteen grams, RBC 3.95, WBC 18,500 with a shift to the left. Repeat blood counts revealed about the same findings except for the white count which returned to normal. Tuberculin tests were negative. Blood sugar was normal.

This patient was given the Wechsler Intelligence Scale for Children, The Rorschach, and the House-Tree-Person Test. On the Wechsler he scored a full scale I. Q. of 135; the verbal scale I. Q. was 135; the performance 128; and the vocabulary 125. Throughout the tests he was soft-spoken and often his voice was almost inaudible. He was intensely serious and overconcerned. A slight tremor of his dominant hand was noted. In all the tests he answered well the things he knew and would not attempt if he did not think that he knew the answer. The Rorschach feature which was most outstanding was the highly constricted state of his personality. He lacked the capacity for expressing emotions and seemed to repress all feelings and to avoid emotionally charged situations as much as possible. His interest in others seemed to be on a superficial basis, and his interpersonal relationships were not good.

Deep-seated anxiety seemed to permeate this personality structure. The House-Tree-Person test did not show much productivity, and there was evidence of a highly constricted, inhibited child, as well as inner tension and feelings of environmental pressure. All of the tests delineated a very constricted, repressed, and anxious individual. There was evidence of poor relationships with the parents and some feelings of hostility, although at the same time it was thought that much of his aggressive feeling was repressed. The boy appeared to be exerting extremely rigid intellectual control over his feelings.

This boy was seen in play therapy sessions on several occasions and seemed to make considerable progress and appeared to be much happier as the sessions were continued. First he did not enter into the games, but later on he would play rather enthusiastically and showed considerable spontaneous behavior, often smiling and laughing. He told the therapist that he did not want to go back home because he was having such a good time at the hospital, and he discussed the unpleasantness and quarrelsomeness in his home situation. He confided that he would not mind going home for a visit just to see how things were, but that he didn't really think that it would be changed in any way.

It was thought that the mother was rather severely disturbed and that her handling of the child had been unfortunate, though well intentioned. There were many inconsistencies in her treatment of the child. She was described as being an intelligent, overly-intellectual, well-meaning mother who tried too hard to rear her children correctly. She was very aware of all the books on child management, but because of her own emotional difficulties seemed to lack the essential qualities of good interpersonal relationships. The mother felt guilty of the entire situation and seemed to be in great need of treatment herself.

Outwardly, the father appeared to be stable and fairly well adjusted, but at the same time was quite rigid and compulsive in many respects. He was given to outbursts of temper and rather inconsistent behavior in his relationships with the children.

Soon after admission the patient was given cortisone for about three weeks, at the same time he was receiving psychotherapy. He was given a regular diet and was allowed much freedom on the ward. The improvement was marked, and the entire family was referred to their local Child Guidance

Clinic for continuing psychotherapy.

The second admission of this boy was six weeks following his discharge from the first admission, and the complaints were the same as before, the diarrhea with mucus and blood having started a week before admissions. The family had not followed through on the recommendations for psychotherapy. During the first few days of this hospitalization his temperature was as high as 102° F., and he was given cortisone and chloromycetin orally. The improvement was prompt. During the hospital stay he was again seen in play therapy sessions, and the parents were seen in interviews in an effort to solve the psychological problems. He was discharged on the nineteenth hospital day, and the parents again were urged to continue with their local guidance clinic.

#### DISCUSSION

Both of these cases illustrate similar characteristics. Each child was above average in intelligence, and they showed almost identical personality make-up. They were constricted with a repression of spontaneity. The capacity for expressing emotions was limited, and there was an avoidance of emotionally charged situations. Both showed evidences of deep-seated anxiety. Interpersonal relationships were on a very superficial basis, and each child seemed to repress considerable hostility.

In each case the mother was the more forceful parent, being unusually dominating, controlling, and rigid in her relationship to the child.

The onset of the diarrhea in the little girl is most interesting in that on three occasions when she returned to the family setting there was almost immediate recurrence.

Conditions for psychotherapy were far from ideal in these situations. However, therapy was directed toward enabling the child to express his emotions in a favorable setting, thereby releasing the inner tensions; and at the same time the therapy was aimed at altering of parental attitudes and in general improving the interpersonal relationships. These cases indicate some of the difficulties encountered in psychotherapy in ulcerative colitis and clearly show that treatment will have to be a continuing process.

#### SUMMARY

The emphasis in this presentation is on the emotional factors in ulcerative colitis in children. The contributions of some of the earlier writers is reviewed

in such a manner as to point out the increasing interest in the psychosomatic nature of this disease. The general opinion is that these children have a personality make-up characterized by passivity, rigidity, dependency on parent figures, repression of hostility, and inability to express effectively their anger and resentment. The parents, most often the mother, appears to be an extremely dominating and controlling person. This behavior pattern in the child appears to have started in infancy and received reinforcement from the environment.

Treatment of ulcerative colitis is different in adults and particularly so in children; hence, in view of our present knowledge of the disease it seems advisable to approach it with the combined strengths of the pediatrician, surgeon, and psychiatrist.

Finally, two cases of ulcerative colitis in children are reviewed and the correlations discussed.

#### BIBLIOGRAPHY

1. Murray, C. D.: Psychogenic Factors in the Etiology of Ulcerative Colitis and Bloody Diarrhea, *Am. Jour. M. Sc.* **180**: 239 (Aug.) 1930.
2. White, B., Cobb, S., and Jones, C.: Mucous Colitis. A Psychological Medical Study of Sixty Cases, *Psychosomatic Med. Monogr.* **1**: No. 1, 1939.
3. Wittkower, E.: Ulcerative Colitis: Personality Studies, *British Med. Jour.* **2**: 1356-1360 (Dec. 31) 1938.
4. Grace, W. J., Holman, C. W., Wolf, S., and Wolff, H. G.: Action of Various Pharmacologic and Other Agents on the Colon of Man, *Arch. Surg.* **61**: 1036-1051 (Dec.) 1950.
5. Wener, H. E., and Simon, M. A.: The Production of Ulcerative Colitis in Dogs by the Prolonged Administration of Mecolyl, *Gastroenterology*, **12**: 637, 1949.
6. Helmholz, H. F.: *Am. J. Dis. Child.* **26**: 418 (Nov.) 1923.
7. Same as No. 1.
8. Brust, J. C., and Borgen, J. A.: Chronic Ulcerative Colitis Among Healthy Persons, *Minnesota Medicine*, **18**: 583-585 (Sept.) 1935.
9. Jackman, R. J., Borgen, J. A., and Helmholz, H. F.: *Am. J. Dis. Child.* **59**: 459 (March) 1940.
10. Groen, J., and Bastiaans, J.: Psychotherapy of Ulcerative Colitis, *Gastroenterology*, **17**: 344-352 (March) 1951.
11. Sperling, M.: Psychoanalytic Study of Ulcerative Colitis in Children, *Psychoanalytic Quarterly*, **15**: 302, (No. 3) 1946.
12. Prugh, D. G.: Influence of Emotional Factors in the Clinical Course of Ulcerative Colitis in Children, *Gastroenterology*, **18**: 339-354 (July) 1951.

### Surgery for Diabetics.

Surgery has become as safe for the diabetic as for the non-diabetic, according to Dr. Charles R. Shuman, Temple University Hospital and School of Medicine, Philadelphia.

Dr. Shuman reported on a three-year study of 340 patients in the (June 12th) *Journal of the American Medical Association*.

These patients underwent 373 operations while under the supervision of the Temple University Hospital diabetic service. There were no deaths directly resulting from diabetes or its treatment.

"The number of diabetics who receive surgical treatment has steadily increased during the past three decades since the discovery of insulin and will continue to increase in future years. The diabetic patient is considered a safe subject for any type of

surgery when modern methods of anesthesia, fluid and electrolyte replacement, antibiotic therapy and control of metabolism and nutrition are used."

Although heart disease and infection increase the risk during surgery and most of the patients studied suffered these complications, only nine patients died in the postoperative period. Although six patients suffered from uremia, a serious complication, four of them made successful recoveries. Complications of diabetes were more frequent in this study because most of the patients were over 45 years old.

"The mortality and morbidity aspects of surgery in diabetics are more closely related to the disease necessitating surgery, the vascular complications of diabetes, and infections than to the diabetes itself."

Proper management of infections with antibiotics, and of heart ailments with drugs has "somewhat reduced" the importance of these factors.



## MANAGEMENT OF PERIPHERAL VASCULAR DISORDERS\*

NATHAN BLOOM, M.D.,  
Medical College of Virginia  
Richmond, Virginia

There are many disorders that may affect the peripheral vascular tree, but in this discussion we will stress the more common diseases encountered in the Out-Patient Clinic of the Medical College of Virginia and our private files. These disorders are arterial embolism, thrombophlebitis, thromboangiitis obliterans, and arteriosclerosis obliterans.

Arterial embolism is often overlooked, especially in cardiacs with ectopic rhythms. Our attention is focussed on the clinical phenomena of heart failure, and peripheral edema may obscure any evidence of arterial damage. Often the patient is critically ill and no subjective reaction of peripheral malfunction can be elicited. The sudden development of a cold, painful extremity with lack of pulsation may be of disastrous consequence to a debilitated cardiac. Treatment must be prompt and adequate if the limb is to be saved. The lower extremity is usually involved and an extremity which has suffered an embolism is deprived of most of its blood supply. It is important not to elevate the limb because the blood pressure distal to the embolus is sharply reduced and is not adequate to force blood to the toes. In addition, when the extremity is raised the blood must be pushed uphill. Therefore, the proper position of the extremity is sloping downward. When the leg is dependent, the arterial circulation is aided by the action of gravity. So our first step is to raise the head of the bed on chairs or blocks. The level of the feet should be below that of the hips. When a major artery is suddenly blocked there is a marked associated spasm of all collateral arteries. Measures to relieve the spasm must be instituted. Occasionally Papaverine in 1 grain doses intravenously every two to four hours may relieve the spasm. Diathermy to the abdomen may also be helpful although we do not advocate local application of heat, as the effect of warmth on tissues is to increase the metabolic rate and also the need for oxygen. When the blood supply has been suddenly cut off, these needs cannot be met, and gangrene may spread if heat is applied directly to the involved limb. Sympathetic block or epidural block may decrease vasoconstriction at

the onset of an arterial embolus and should be performed. Anticoagulants are indicated as soon as possible. We usually start by injecting 50 mgms. Heparin intravenously. This should be repeated in three hours, followed by Dicoumarol in dosages depending on the level of the prothrombin time.

Surgical removal of the embolus must be considered in every case. Conservative treatment is only justified for several hours, as best results from embolic removal are obtained if surgery is performed within the first twelve hours. Very often the patient does not enter the hospital until several days have elapsed. In these cases it is advisable to be very conservative, attempting to improve the general status of the patient. If gangrene develops in spite of all measures taken, amputation must be performed, but surgery may be delayed if there is not much pain or general toxemia with spreading infection. We always hope that the patient will develop dry gangrene and demarcate so that the leg could be amputated at a lower level.

Thrombophlebitis is very often the most difficult of peripheral vascular diseases to treat. Involvement of the superficial veins may be a benign and relatively simple condition frequently complicating varicose veins but also occurring as a migratory or traumatic reaction. The diagnosis of superficial thrombophlebitis is not difficult as the superficial veins are thickened, painful and tender. The danger of pulmonary embolism is remote. During the active stage elevation of the extremity and hot, wet compresses usually will be followed by improvement. As soon as possible the patient should apply an elastic bandage or stocking and begin ambulation.

Thrombophlebitis of the deep veins in the lower extremities may be much more serious, and at times extremely dangerous, because this type often results in pulmonary embolism or leaves the patient permanently disabled with chronic venous insufficiency. Deep thrombophlebitis may complicate any confining illness or major operation and should be prevented if possible by passive exercise of the lower limbs and elastic bandages post-operatively, followed by early ambulation. Prevention of a thrombotic

\*Presented at the Fifty-third Annual Meeting, Association of Surgeons of the Southern Railway System, April 10, 1954.

process of the veins by any method at our disposal is better than attempting to cure this disturbance. The dangerous period is at the onset of the phlebitis because then loose thrombi begin to form in the deep veins of the calf. It is during this time when there are minimal symptoms and findings. One must attempt to recognize these trivial reactions in order to prevent a fatal pulmonary embolism. In some hospitals, prophylactic ligation of superficial femoral veins in elderly patients is advocated prior to major surgery. The finding of tender calf muscles or a positive Homan's sign warrants immediate anticoagulant therapy.

Chronic venous insufficiency is the end stage of deep vein phlebitis. This is one of the major problems in our clinic. The patients have large edematous legs, very unsightly and tender, and often complicated by post-thrombophlebitic ulcers. It is almost impossible to obtain healing of the ulcers unless the patient remains at complete bed rest over a long period of time. Plastic operations are unsatisfactory and very often elastic bandages or stockings do not control the edema. Although some observers advise sympathectomy, we have seen very little improvement following this procedure. Our best cases have been those individuals willing to spend several months in the hospital. Their general nutrition must be improved and any evidence of anemia should be corrected by transfusion. A combination of superficial femoral vein ligation and ligation of all communicating veins with full thickness skin grafts to the ulcer, judicious use of antibiotics and, in addition, sympathectomy, have proved more successful than any isolated procedure. Unfortunately, even with all of these methods there have been recurrences of edema and ulcers. Patients seldom die of chronic venous insufficiency but they certainly are very uncomfortable and unhappy. So the only hope is to prevent rather than cure deep vein thrombophlebitis. This means constantly being aware of this complication after operation and in debilitated patients at prolonged bed rest. Immediate prophylactic procedures, such as vein ligation or anticoagulant therapy, may prevent pulmonary embolism and chronic venous insufficiency.

Thromboangiitis obliterans is a fascinating malady but only occurs in about 3% of our patients with peripheral vascular disease. The etiology is unknown and few cases are seen early enough for us to study the beginning pathological process. Occasionally a

superficial migratory phlebitis may herald the onset of this condition, but more often there is serious involvement of the arteries and veins in one or more extremity when the case is first seen. Intermittent claudication with absent peripheral pulsation in one or more vessels occurring in young individuals with or without superficial phlebitis is usually diagnostic of this malady. If any ulceration or gangrene is present, the patient must be treated in the hospital. Our approach to therapy will be discussed under the treatment of arteriosclerosis obliterans.

About 90% of our cases, both in our private files and the Out-Patient Clinic at the Medical College of Virginia are individuals with arteriosclerosis obliterans. Often this is a complication of diabetes. Usually the diabetes is of a mild nature but certainly diabetics develop arteriosclerosis much earlier and more often than normal individuals. We are not sure about why this occurs although it is probably related to the abnormal cholesterol reaction in diabetics. Most of these patients have a presenting symptom of intermittent claudication. Many have passed this stage and have already developed rest pain, ulceration, or gangrene of the toes.

In beginning our therapy, relief of pain is most important. An ideal approach would be to improve peripheral circulation and one would assume that with so many peripheral vasodilators on the market this would be simple, but in our experience up to this time there is no satisfactory drug available. We have tried them all, including Priscoline, Dibenzyl-line, Hydergine, Roniacal, hypertonic saline, Papaverine, and Ilidar. Most of these drugs are supposed to be ganglionic blocking agents, but unfortunately they cause general vasodilatation rather than local vasodilatation. At times the blood flow is actually lessened to the involved extremity as the sclerotic vessels are unable to dilate. Placing the patient at complete rest with slight dependence of the extremity will often relieve most of the pain. The application of heat to the body will improve peripheral blood flow but we do not advise direct heat to the involved extremity. Sometimes the only way to relieve severe foot pain is section of cutaneous nerves just above the ankle. Usually these incisions will heal and the patient obtains enough relief so that local treatment may be given to the ulcers about the toes and feet. Sympathectomy may be the procedure of choice in thromboangiitis obliterans but we are not too happy about this procedure in the elderly arteriosclerotic;

but, at times, if the extremity has a tendency to perspire, sympathectomy may help.

All individuals with impaired circulation have to follow certain general rules. They are not allowed to smoke. It is well known that a certain amount of vasoconstriction is caused by smoking. Foot hygiene and foot care are very important. Fungous infections about the toes must be eradicated. We advise 1-10,000 potassium permanganate soaks every night and the application of Desenex ointment. The patient is taught to walk slowly, at times even acquiring a limp. This alone may be sufficient to prevent intermittent claudication. Minor abrasions or infections must be treated energetically. Antibiotics are given freely and very often have prevented amputation. We try to teach the patient how to live

within his circulatory reserve and also explain in detail why it is necessary to follow our instructions as to smoking and foot hygiene. We have also found that close cooperation between surgeon, chiropodist, and internist, especially in the clinic, has saved many limbs from amputation.

In conclusion, we would like to emphasize the importance of diagnosing these conditions before gangrene has developed. If we are alert to the problem of peripheral vascular disease, often the diagnosis is simple. The combination of careful foot hygiene, restriction of smoking, teaching the patient, elimination of fungous infections, and the judicious use of antibiotics, should help save many of these patients from the tragedy of a blighted existence due to the loss of an extremity.

---

### Relief from Severe Pain.

A new drug, already shown to be effective in controlling nausea, now promises to relieve pain in patients who no longer get adequate help from large doses of narcotics. The new drug chlorpromazine was found "useful" in such cases by five Illinois doctors who report on their findings in the June 12th Journal of the American Medical Association.

They said 22 of 28 patients treated with chlorpromazine in addition to narcotics or sedatives which had not helped alone were given "satisfactory relief" from severe abdominal, bone and nerve pain. Narcotics requirements also were reduced. Their study confirms earlier reports that the drug, originally developed by a French laboratory, relieves nausea and vomiting, they said. Four of five patients reported complete relief from nausea. The other was relieved of nausea but only slightly relieved of vomiting.

Two Canadian doctors reported earlier this year they had used the drug with "pronounced effect" in quieting severely excited patients without making them confused or otherwise inaccessible to psychotherapy.

The latest study was made on patients who were all "seriously ill." All had severe pain and all but one had cancer. Of the 18 hospitalized patients in the group, 14 were "satisfactorily relieved" by chlorpromazine, one got fair relief, and one reported no relief. Two other patients defaulted in taking medication. Of the 10 outpatients studied, eight were relieved and two reported no effect. A "singularly good effect" was reported by the two outpatients with cancer. Some patients whose pain was not actually changed "seemed to be more relaxed and less reactive to their pain." "They spoke of their pain as an objective phenomenon; that is, they no longer minded the pain, even though it was still present." Except for drowsiness, side-effects were "minimal." Ten of the 18 hospitalized patients reported drowsiness, five reported "dry mouth," and one suffered wild dreams, which may not have been caused by the drug, they said.

The report was made by Drs. Max S. Sadove, Myron J. Levin, Raymond F. Rose, Lester Schwartz, and Frederick W. Witt, of the Veterans Administration Hospital, Hines, Ill., and the University of Illinois College of Medicine, Chicago.



## RUPTURE OF THE DESCENDING COLON— Report of a Case\*

RUSSELL BUXTON, M.D.,  
Newport News, Va.

The following case, a patient with a previously asymptomatic obstructive carcinoma of the sigmoid colon and with subsequent rupture of the descending colon, seems worth reporting because of the errors made in diagnosis and because of the interesting sequence of events which occurred during the course of the case.

The patient, a 64 year old white man, was admitted to the Elizabeth Buxton Hospital at 7:00 P.M. on March 3, 1952, with the story that he had been perfectly well until the morning of admission when he was awakened from sleep with pain in the right lower abdomen just above the symphysis. In a short time, the pain became quite severe and covered the entire abdomen and he called his family physician who gave him a hypodermic which did not give him any relief. Later in the day, he saw another physician who immediately referred him to the hospital by ambulance. According to the patient, there had never been any previous similar attacks and actually, he had no bowel symptoms of any kind except slight constipation. There had been no nausea, no vomiting, no jaundice, no urinary complaints, and no blood in the stools. The only significant finding in his past history was that he had been treated over a period of years for primary pernicious anemia. His family history was not obtained.

On admission, the patient was found to be disoriented, his temperature was 103, pulse 68, respiration 16 and his blood pressure was 125/70. The patient was quite knocked out and in shock. Examination of the chest revealed essentially normal findings. The abdomen was distended and no scars were noted. Palpation of the abdomen revealed marked tenderness in the right lower quadrant with spasticity of the entire right rectus muscle, but on the left side of the abdomen, however, there was no spasm. Peristalsis was absent. A rectal examination showed a normal anus, somewhat large prostate but was otherwise normal. The urine was red in color, apparently due to hemoglobinuria as there were only a few red cells found.

A urological consultation was obtained because of

the location of pain and blood-colored urine, but the consultant, Dr. A. A. Creecy, did not feel that there was any change in the right kidney to account for the patient's pain. A blood count showed 5,480,000 red cells, 100% hemoglobin, 21,500 white cells with 82% polys but no evidence of primary anemia was noted on smears. A Mazzini blood test was negative. The first diagnostic impression was duodenal ulcer with perforation, but acute appendicitis and carcinoma of the cecum with perforation were also considered as possibilities. The patient was given intravenous fluids because of shock and a Levine tube was inserted for continuous gastric drainage and in a few hours the patient seemed much more comfortable.

The first day after admission, laboratory examination showed the red count to be 3,820,000, white count 14,150, with 87% polys, and the blood urea was 110 mgms. %, the hematocrit was 38% and a stool specimen was positive for blood. Another urine specimen showed three plus red blood cells and a heavy trace of albumin. X-ray examination, with the patient in upright position, showed distended loops of the small bowel with some distention of the ascending colon. The following day, the patient's condition was good. He was rational and received fluids by vein and by mouth. On the next day, March 6th, the patient was greatly improved, his icterus index was 7 units, his blood urea was 60% and his abdomen was much less distended. By March 7th, four days after admission, the patient stated that he felt he was well. He was on a liquid diet, the Levine tube having been removed, and his abdomen was soft, but there was some tenderness in the right lower quadrant. His bowels were moving spontaneously, but the stools were still dark and foul, although re-examination of the rectum was negative. A urinalysis was normal. Because of apparent anemia (not borne out by blood studies) he was transfused on the 7th and 8th of March. By March 10th, one week after the onset, the patient seemed to be much better, he had no complaints, and rectal examination was again normal. On March 11th he was allowed out of bed and at this

\*Read before the Virginia Surgical Society, at Hot Springs, Va., January 16, 1954.

time appendicitis with localized peritonitis was considered as the probable etiology of his condition and he was considered ready for discharge.

On the night of March 12th, the patient began to have severe pain in the right lower quadrant with some distention, and his temperature went up to 103. A Levine tube was reinserted and he was given infusions, and because he had gotten along so well under conservative treatment, it was again advised. However, the next day the patient was greatly distended and x-ray of the abdomen showed what appeared to be a large bowel obstruction and operation was deemed imperative. At this time, a diagnosis of rupture of a localized appendiceal abscess into the peritoneal cavity with generalized peritonitis was considered, and operation was advised with this as the preoperative diagnosis.

At operation, which was done under pentothal, nitrous oxide and curare, a right transverse incision was made and the following condition was found: There was fecal material free in the abdominal cavity. The ascending and transverse colon were found to be tremendously dilated and the small bowel was slightly dilated but it was adherent to a large mass on the left side of the abdomen. This mass was found to consist of the sigmoid colon which had been drawn up, and had become attached to the transverse colon near the splenic flexure. When the sigmoid colon was freed from the transverse colon, an obstructive lesion was found in mid-sigmoid and, approximately three inches proximal to the malignancy, the descending colon was ruptured for eight inches. The edges of the ruptured portion of the bowel were adherent to the peritoneum lining the anterior abdominal wall and were freed from it with some difficulty. In order to deliver the ruptured bowel, a second transverse incision was made on the left side of the abdomen and the diseased portion of the bowel including the carcinoma and the entire torn portion of the colon were brought through this new incision and removed, together with a large portion of the meso-colon. A Rankin clamp was used to close both distal and proximal openings of the double-barrelled colostomy and a cecostomy was done, using a mushroom catheter which was brought out through the right-sided incision.

As anticipated, the patient's immediate post-operative condition was quite poor, some of his shock apparently being due to the cumulative effect of

curare as he responded quickly to prostigmin-methylsulfate when it was given intravenously about one hour post-operatively. He was put on SRD-penicillin, intramuscularly, terramycin intravenously, and given blood, glucose and potassium intravenously. The following day his urinary output was fair, the Levine tube was draining well and his general condition seemed good. The Rankin clamp was removed from the colostomy on the third post-operative day and he was removed from the oxygen tent and anti-biotics were reduced. There was, however, no drainage from the cecostomy tube, but a large amount of pus drained from both wounds. Four days post-operatively, he had a normal stool through the proximal colostomy opening and his condition gradually improved until nine days post-operatively, when he had a sudden severe pain in the chest with fainting spell and cyanosis. A diagnosis of pulmonary embolism was made, which was confirmed by x-ray the following day, the x-ray film being consistent with a pulmonary infarct. For this he was treated with anticoagulant therapy by the medical consultant, Dr. R. T. Peirce, Jr., and improved rapidly. The nasal tube was removed on the 10th post-operative day and, following this, except for purulent drainage from both wounds, he got along well. A spur clamp was applied to the double-barrel colostomy three weeks following surgery, but this did not stay in place and he was instructed as to the care of his colostomy and discharged as improved five weeks after operation.

The pathological report showed carcinoma of the sigmoid colon with partial intestinal obstruction and rupture of the descending colon and metastasis to the mesenteric nodes and a diphtheritic membrane in the ruptured portion.

Three months after operation, digital examination of the distal colostomy opening revealed what appeared to be a recurrent carcinoma. At this time all thought of closure of the colostomy was dropped, though the spur clamp was reapplied, hoping that the continuity of the bowel might be re-established, but this failed. The patient returned six months following surgery, at which time he was seen with a greatly enlarged liver and jaundice. This was felt to be due to a metastatic lesion of the liver, but within a few weeks the jaundice had cleared and the patient began to feel well, so it was apparent that he had had homologous serum hepatitis from his

transfusion. The patient has been followed regularly by his family physician, Dr. R. B. Brown, and by me, having been seen last September 25, 1953, at which time his general condition remained good, but there was still a mass palpable on examination through the distal loop of the colostomy. A biopsy of this was obtained which proved to be adenocarcinoma.

The interesting features of this case seem to be the fact that, as far as can be determined, this man came into the hospital in severe shock following rupture of the bowel due to distention resulting from an obstructive carcinoma of the sigmoid together

with kinking of the bowel proximal to the tumor. The free edges of the bowel apparently became adherent to the peritonum of the anterior abdominal wall and formed a canal through which fecal material could pass, enabling him to have bowel movements, and it was not until the fecal contents leaked through the edges of this channel into the general peritoneal cavity did generalized peritonitis develop. His post-operative course was complicated by respiratory failure due to cumulative effect of curare, infection of both operative wounds, a pulmonary infarct and homologous serum jaundice, all of which he survived, but, unfortunately, due to metastasis, his outlook is hopeless.

#### New Illness Resembling German Measles.

An outbreak of a new, mild illness, characterized by a skin eruption, is described in the June 5th Journal of the American Medical Association.

The disease, prevalent in and around Boston in 1951, was found to be both infectious and contagious, according to three physicians who made a study of 18 cases and reported 2,450 cases seen by other physicians. Although the condition had some of the features of German measles, careful study showed that it is probably an entirely new type of infection. The 18 patients studied by the physicians ranged in age from four months to 26 years. The majority of patients had a fever of about 102F which lasted one to two days and was accompanied by a sore throat, a generalized aching of muscles, and chills.

All the children, but only one of the three adults afflicted, exhibited varying degrees of skin eruption. The rash usually was most evident over the face and upper chest, appearing in most cases after onset of the other symptoms and within one or two days after the fever had subsided. Some of the patients suffered mucous membrane lesions and enlargement of their neck glands. None, however, appeared severely ill. Multiple cases appeared in two families.

A questionnaire regarding the new disease was sent to physicians in Massachusetts. The 123 phy-

sicians who replied stated they had seen about 2,450 such cases between May and September, 1951. According to the replies, the epidemic eruptive disease affected primarily children 10 years of age or younger, and was characterized by fever and a skin rash that appeared either during or after fever had subsided. Fever and the rash lasted at least 24 hours in most cases, and in many cases lesions of the throat were apparent. Multiple cases were not uncommon in a single family.

"There appears to be little doubt that the outbreak of illness described here represents an infectious and communicable disease entity," the doctors stated. "Study of a group of 18 patients with the disease as well as results from a questionnaire circulated among practicing physicians who encountered the illness indicated that the exanthem [eruptive disease] represented a definite clinical entity that did not readily conform with the more commonly known exanthems.

"It may be concluded that the disease we have encountered in most of the patients, although it may share some features of certain common exanthems, probably is an infection *sui generis* [in a class by itself.]"

The report was prepared by Dr. Franklin A. Neva, Pittsburgh, and Drs. Roy F. Feemster and Ilse J. Gorbach, Boston.



## THE TREATMENT OF CHRONIC BRONCHITIS\*

W. LEROY DUNN, M.D.,  
Washington, D. C.

Although chronic bronchitis is probably the most common chronic pulmonary disease, nearly all cases are secondary to some other disease. Primary chronic bronchitis which may occur in individuals who inhale irritants over long periods of times, accounts for a very small part of the total incidence of this disease. Fortunately for both physician and patient, the diagnosis—primary chronic bronchitis—is made less often with each passing year. This diagnosis is not justified until a careful study of the patient has failed to reveal some underlying cause. Unless the physician bears this in mind, he may fail to recognize and treat the primary disease. This may lead to disaster.

Chronic bronchitis occurs commonly with pulmonary emphysema, in long standing congestive heart failure, chronic paranasal sinus infection, pulmonary tuberculosis, bronchiectasis, lung abscess, neoplasms, allergies, and bronchial obstruction from whatever cause. Many other disease may be accompanied by chronic bronchitis.<sup>1</sup>

It is obvious, therefore, that if chronic bronchitis is to be cured, or better, prevented, early diagnosis of the primary disease is essential and prompt and adequate treatment is necessary. No amount of treatment of the bronchitis will avail if the emphysema or congestive heart failure present is ignored. Many cases of tuberculosis and of carcinoma of the lung have been mistakenly treated for chronic bronchitis. When the correct diagnosis was made, the primary disease had progressed beyond hope of arrest or cure.

While chronic bronchitis may occur at any age it is more commonly encountered in older patients. Since in the general population the number of persons past sixty years of age is steadily increasing, the problem of diagnosing and treating chronic bronchitis becomes increasingly more important.<sup>2</sup>

A brief review of the anatomy of the normal bronchus and its alterations in chronic bronchitis may prove helpful in understanding the difficulties involved in treating this condition.

The larger bronchi are lined by tall ciliated columnar epithelial cells which rest on a narrow basement membrane. Numerous goblet and mucus-secreting cells are interspersed among the columnar cells. The sub-epithelial layer is composed largely of connective tissue containing nerve fibers, lymphatics, and capillaries. Outside this is a layer composed of smooth muscle which contracts during expiration. An adventitial layer covers the muscle peripherally. Mucous glands are found extending through the first three layers to the adventitia. The action of the cilia of the columnar cells moves mucus and foreign material from the bronchus toward the trachea.<sup>3</sup>

Alteration of the normal anatomy is striking in chronic bronchitis. The basement membrane, the sub-epithelial layer and the muscle coat are thickened. The tall columnar cells are shorter and many have lost their cilia. In severe cases some areas have lost the epithelial covering and are ulcerated. The lumen of the bronchus is smaller. It is obvious that where such a condition exists cure in the sense of a return to a normal state is not possible. It does not follow, however, that nothing can be done for the patient.<sup>4</sup>

The first step in treating such a condition is to seek the primary cause and eliminate it if possible. If tuberculosis, bronchiectasis, a tumor, or congestive heart failure is found, treat that disease promptly and vigorously, for half-way measures have no place in the treatment of pulmonary disease.

In treating the bronchitis the patient's general condition should be studied. Minor deviations from the normal should be remedied where possible. General health should be maintained at the highest level. Particular attention should be given to diet, rest, recreation and general hygiene. Diet should be simple, wholesome, and sufficient to maintain a satisfactory weight. A life of moderation in all things, including adequate rest and sufficient but suitable recreation, should be followed. In cold weather clothing should be adequate to prevent chilling. The home and office should be kept at an even temperature and comfortably warm, but not overheated. Tonics, hormones and vitamins may be helpful in

\*Read before the Virginia Chapter, American College of Chest Physicians, at the meeting of the Virginia Academy of General Practice, Richmond, Virginia, May 6, 1953.

selected cases where there is definite indication for their use.

The patient's physical environment is important. Symptoms will be fewer in a warm, mild, dry climate where the air is free of smoke, dust and irritating fumes. It is usually not desirable to uproot patients with chronic bronchitis to move them to a more favorable climate. Most patients are happier and fare better if they can continue as nearly a normal routine as their situation will permit. If the place of work is cold and drafty, or if the air is dusty or contains irritants, correction of these conditions will benefit the patient and may enable him to continue at his old job.

The use of tobacco always poses a problem. It is probable that there is always some aggravation of cough as a result of smoking. Yet the physician hesitates to prohibit smoking unless he is satisfied that in a given case tobacco is definitely harmful. The decision must depend on a consideration of the patient as well as his bronchitis.

Many drugs have been prescribed in the treatment of chronic bronchitis but none has proved specific. The expectorants have been used for many years and have afforded a measure of symptomatic relief. Their greatest field of usefulness is in patients with severe cough whose sputum is thick and tenacious. The most popular expectorants are potassium iodide, ammonium chloride and ipecac. The use of one or more of these drugs, with or without small amounts of codeine is often helpful. In selected cases the addition of postural drainage may be beneficial since it permits more adequate emptying of the bronchi with less effort and less cough.

The so-called bronchodilator drugs may be of considerable help in alleviating some of the symptoms of chronic bronchitis. Epinephrine, ephedrine sulphate, atropine and aminophylline have had a wider use than other members of this group. Except in unusual circumstances orally administered preparations will accomplish as much as those given by inhalation or injection.<sup>5,6</sup>

Many preparations of the antihistaminic drugs have been used in the treatment of chronic bronchitis. Except in an occasional case the results have been disappointing.

The drug therapy discussed thus far is designed to relieve the patient's symptoms. The sulfa drugs and the antibiotics have a direct effect on the in-

fecting organisms. These drugs are most effective in the subacute phase of the disease or during an exacerbation of the chronic process. Since there is no known treatment that will eradicate the infection in chronic bronchitis, and since it is not desirable to give either sulfa or the antibiotics over long periods, care and good judgment are needed in deciding when one of these drugs is indicated and how long it should be continued.

In many cases of chronic bronchitis the sulfa drugs give good results and are adequate for the purpose. Sulfadiazine has had a wider use than any other sulfa preparation. Recently combinations of sulfonamides such as sulfamethazine, sulfadiazine and sulfamerazine in equal parts have been prepared in half-gram tablets. The dosage is the same whether a single sulfonamide or a combination is used. The total dosage must be suited to the need of the patient. In most cases an initial dose of two to four grams, followed by three to five grams daily in divided doses will suffice.

Of the antibiotics penicillin has proved the most useful in the treatment of chronic bronchitis. It may be administered either orally or by injection. The addition of sulfonamides to the oral tablet is thought by some to give better results than oral penicillin alone. Aureomycin, terramycin and chloramphenicol are just as effective as penicillin or sulfa in controlling most bronchial infections. Many patients complain of gastrointestinal symptoms, chiefly loss of appetite, gas, and soft stools, after the administration of aureomycin, terramycin or chloramphenicol. These symptoms may be attributable to the suppressing effect of these drugs on the normal intestinal flora, chiefly the colon group. Fungi present in the intestinal tract and ordinarily inhibited by the presence of colon bacilli, grow rapidly and give rise to the gastrointestinal disturbances mentioned.<sup>5</sup>

Streptomycin or dihydrostreptomycin may be used in the treatment of chronic bronchitis, if intolerance to other antibiotics develops or if the organisms have become resistant to the other antibiotics. Where the tubercle bacillus is the etiologic agent, streptomycin or dihydrostreptomycin should be used.

Of the more recently studied antibiotics erythromycin appears to be a valuable addition to therapy. While clinical experience is not yet sufficient for a final appraisal of its effects, it seems to inhibit most

penicillin susceptible organisms, particularly gram positive cocci. Reports indicate little if any inhibiting effect on colon bacilli. Theoretically few gastrointestinal symptoms are expected following its use.

The optimum dosage has not been established for any one of these antibiotics. It is well known that in the presence of small doses of any antibiotic, the infecting organism may develop resistance to the drug. For this reason and until optimal dosages are established, certain minimum daily doses are advisable: penicillin, three hundred thousand units by injection, or eight hundred thousand orally; aureomycin, terramycin and chloramphenicol, one gram; erythromycin, eight hundred milligrams. Orally administered antibiotics are given in divided doses.

A word of caution is needed regarding the use of combinations of antibiotics simultaneously. On the basis of many recent studies it seems certain that under some circumstances penicillin, streptomycin and dihydrostreptomycin are antagonistic to aureomycin, terramycin and chloramphenicol. Studies have shown that in specific instances combined penicillin-aureomycin therapy was less effective in controlling infection than either antibiotic given alone. Except in unusual situations it is wise to use one antibiotic, and only one at a time.<sup>7,8,9,10</sup>

Where therapeutic response has been disappointing, culture of the sputum to determine the nature of the organisms present may supply helpful information. A laboratory test of the sensitivity of these organisms to the sulfa drugs and different antibiotics will aid in selecting the most effective agent.

For a time inhalation therapy using penicillin or streptomycin in the treatment of chronic bronchitis and other pulmonary diseases seemed promising. During the past two years, however, the use of inhalation therapy has declined sharply. Many clinicians have concluded that their results are as good, if not better, when penicillin is given orally or by injection.

Recently efforts have been made to liquefy heavy bronchial exudates by the inhalation of solutions of

proteolytic enzymes. The value of this method and its possible harmful effects have not been thoroughly investigated, so it cannot be recommended for use at the present time. At some future date these enzymes may prove a valuable addition to therapy in chronic pulmonary diseases.

In summary, most cases of chronic bronchitis are secondary to some other disease, either pulmonary or non-pulmonary. Hence successful treatment depends on finding the primary cause and treating it adequately. The pathologic changes that occur in long standing chronic bronchitis are irreversible, so that restoration to normal is not to be expected. However, the patient's general condition can be improved and his symptoms considerably lessened by appropriate treatment. The development of the sulfa drugs and the antibiotics has proved a boon to those afflicted with chronic bronchitis. However, the wise and considered use of these agents is important if the patient is to receive the greatest possible benefit.

#### BIBLIOGRAPHY

1. Myers, J. Arthur: *The Chest and the Heart*, 1st ed., Chas. Thomas, Springfield, Ill., 1948, p. 297.
2. U. S. Census Report, 1950.
3. Miller, W. S.: *The Lung*, Chas. Thomas, Springfield, Ill., 1947.
4. Sodeman, William A.: *Pathologic Physiology: Mechanisms of Disease*, 1st ed., W. B. Saunders, Philadelphia, 1950, p. 225-235.
5. Conn, Howard F.: *Current Therapy*, 1952, Saunders, W. B., Philadelphia, p. 85.
6. Sollman, Torald: *A Manual of Pharmacology*, 7th ed., Saunders, W. B., Philadelphia, p. 777.
7. Jawetz, E., Gunnison, J. B., Bruff, J. B., and Coleman, V. R.: Studies on Antibiotic Synergism and Antagonism, *Journal of Bacteriology*, July, 1952.
8. Dowling, H. F., Lepper, M. H., and Jackson, G. G.: When Should Antibiotics Be Used In Combination, *J.A.M.A.*, **151**:813, 1953.
9. Jawetz, E., and Gunnison, J. B.: An Experimental Basis of Combined Antibiotic Action, *J.A.M.A.*, **150**: 693, 1952.
10. Brown, Curtland, Jr.; Propp, Simon; Guest, C. Maynard; Beebe, Richard T., and Early, Lawrence: Fatal Fungus Infections Complicating Antibiotic Therapy, *J.A.M.A.*, **152**:206, 1953.

1150 Connecticut Avenue.



## THE INDICATIONS AND TECHNIQUE FOR INTERMARGINAL EYELID ADHESIONS (TASORRHAPHY)\*

E. W. PERKINS, M.D.,  
Richmond, Virginia

With the present large number of accident cases there will be times when many physicians will be called on to repair injuries of the face and eyelids which will require some understanding of the value and technique of intermarginal lid adhesions.

The late Doctors Webb Weeks and John Wheeler of New York stressed the importance and taught the simple technique of intermarginal lid adhesions, but the subject either has been omitted or inadequately treated in the standard text-books on ophthalmic or plastic surgery. Not until the recent book on Ophthal-

ever, depending on the individual case, two tarsorrhaphies are usually created; one at the junction of the inner and middle thirds of the lids and the other at the junction of the middle and outer thirds. After healing and some stretching, the lids should separate enough to allow the patient to use the opening between the adhesions for seeing.

### INDICATIONS

Tarsorrhaphy becomes necessary whenever the surgical repair of injuries to the lids produces a vertical



Fig. 1(Perkins). A case of neuro-paralytic keratitis with two tarsorrhaphies and a central opening between the adhesions for seeing

mic Surgery by Sidney Fox has adequate space been given the subject.

Tarsorrhaphy, which is the technical term for intermarginal lid adhesions, is the surgical occlusion of a portion of the palpebral fissure by approximation of the eyelid margins (Fig. 1). One central tarsorrhaphy may suffice for minor procedures. How-

tension or pull on the tissues. Healing of the lids in the presence of a vertical tension on the tissues will produce contracture deformities. A contracture of the upper lid gives an inverted V-shaped deformity and contracture of the lower lid gives a pulling down and turning out of the lid. Such deformities, even when slight, are most disfiguring and every effort should be made to avoid them.

In addition to preventing contracture deformities, intermarginal lid adhesions are a fundamental procedure in plastic surgery. The skin of the lids is loose and normally is thrown into folds when the eyes are open. The adhesions keep the lids in the

\*From the Department of Ophthalmology, Medical College of Virginia, and the Veterans Administration Hospital, Richmond, Va. The drawings are by Don James, U. S. Veterans Administration Hospital, Richmond.

Read before the regular meeting of the Richmond Academy of Medicine, along with the presentation of a movie film demonstrating the technique of the Weeks' tarsorrhaphy, on November 10, 1953.

closed position. It is necessary the lids be immobilized and splinted during skin grafting in order to prevent shrinkage and contracture of the graft while it is healing. The surgeon should have no hesitancy about using lid adhesions. It is much better to create an unnecessary tarsorrhaphy than to have a graft heal improperly.

Tarsorrhaphy is part of the treatment for neuro-paralytic keratitis and other trophic disturbances of the cornea. Also, the neuro-surgeon frequently will use intermarginal lid adhesions until there is return of motor function following the surgical operation

of the tarsorrhaphies. The cuts in the upper and lower lid margins are made exactly opposite each other. This is necessary to prevent misplacement and distortion of the lids. The lid is then securely held with a firm forceps and with the margin everted two horizontal incisions, 1 mm. apart, are made between the vertical cuts to outline the amount of muco-cutaneous intermarginal tissue to be excised. A thin rim of epithelium is left on the conjunctival side of the lid margin and on the skin side the horizontal incision is just posterior to the eyelashes. The rectangular areas thus outlined are excised by pass-

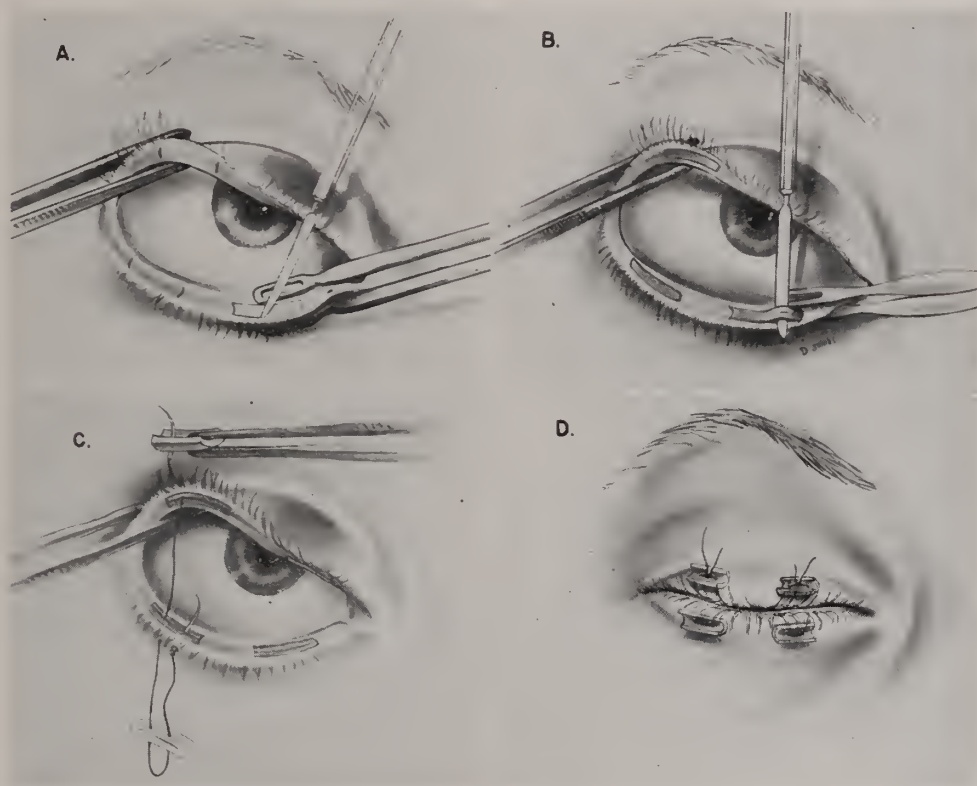


Fig. 2 (Perkins). Weeks' tarsorrhaphy. A. Vertical cuts are made on the lid margins to mark the sites and horizontal incisions are made between the cuts to outline the tissue to be removed. B. The tissue is excised. C. Double-armed sutures are inserted. D. The sutures are tied snugly.

which divides the trigeminal nerve in the treatment for neuralgias of the nerve.

#### PROCEDURE

The Weeks' operation for tarsorrhaphy is simple but requires some care. The following Weeks' technique, with slight variations, is essentially the same as that described by Fox:<sup>1</sup> The lids are held together in their normal position and vertical cuts, 5 mm. apart, are made on the lid margins to mark the sites

ing a cataract knife on the flat and with a sawing motion the tissue is removed. In this way a clean rectangular raw area is created on the lid margin. The raw areas are then split into skin muscle and tarsoconjunctiva to a depth of 2 mm. The two needles of a double-armed 0000 black silk suture are passed through a small rubber peg and are introduced approximately 3 mm. below the margin of the lower eyelid. The needles are passed through the mid portion of the raw rectangular area of the lower

and upper eyelids to emerge through the skin 3 mm. above the lashes of the upper lid. The needles again are passed through a rubber peg and the suture is firmly tied, bringing the raw surfaces into firm apposition. The same suture procedure is followed for each tarsorrhaphy.

Bacitracin ointment and a light dressing are applied. Dressings are done every two days. The tarsorrhaphy sutures should be left in 12 to 14 days to assure complete healing, for otherwise the lid adhesions may separate. The suture is easily removed. To remove, it is cut over the lower peg and pulled out by the knot over the upper peg.

The adhesions may be left for an indefinite time. In the treatment for neuro-paralytic keratitis it is necessary the adhesions be left in place for at least 6 months. When used as adjuncts to grafting procedures and when used to prevent contracture deformities during lid repair they should be left in place for at least 3 months.

When ready to be released, a small amount of 2% procaine is injected into each area of union which is then cut with a small scissors. The raw surfaces are re-epithelialized rather quickly and are usually completely healed in three or four days.

#### COMPLICATIONS

The chief complication resulting from improperly performing the tarsorrhaphy is that of the adhesions not holding and the lids soon pulling apart. If the lashes are disturbed they may be either permanently lost or grow inward and cause pain and injury by rubbing on the cornea. An adhesion made over the lacrimal punctum will block the drainage system of the eye. Removing too much tissue at the lid margin when performing the tarsorrhaphy can cause a permanent notch in the lid margin after the adhesion is severed.

#### SURGICAL FUNDAMENTALS

Along with emphasizing the importance of lid adhesions, it seems appropriate to mention briefly some of the fundamentals involved in the surgical repair of the eyelids. Injuries to the lids are common after automobile accidents, and it is well to remember that the future appearance of the patient often depends upon the judgment and skill of the

physician who first has charge of the patient. When repairing the lids it is important that no tissue be excised which can possibly be saved. Care should be taken to identify the tissues in order that similar tissues will be sutured together. The skin on the lids is very thin and loose and, consequently, has a tendency to roll on itself when cut, thus requiring special care when suturing the raw edges. When closing the skin, interrupted sutures should be used. Through and through lid lacerations are best closed in layers. The tarso-conjunctival layer is closed separately and the skin-muscle layer over it is sutured as an independent layer.

Large needles and sutures, such as used in repairing lacerations of the body, should not be used on the eyelids. Most emergency and operating rooms have sterile eye sutures, which are readily available in glass ampules. A 0000 black silk eye suture with attached cutting needles is preferred. The needle can be held with a small Kelly forceps should an eye needle holder not be available. Accurate approximation of the wound edges before swelling or edema distorts their relationship may save months of later hospitalization with repeated plastic operations. If the lid margins have been cut, much care must be taken in bringing them into exact apposition. The lid margins must be kept against the globe and not allowed to become either everted or inverted. Any surgical repair must be done with the knowledge that in order to obtain a satisfactory cosmetic result it is necessary to take the time to place intermarginal adhesions whenever there is a vertical tension on the wound, or, otherwise, a cicatricial contracture will lead to a disfiguring deformity.

#### SUMMARY

Intermarginal eyelid adhesions are discussed and the technique of the Weeks' tarsorrhaphy is described. While emphasizing the importance of lid adhesions to prevent contracture deformities, attention is called to some of the surgical fundamentals involved in repair of the eyelids.

#### REFERENCES

1. Fox, Sidney A.: *Ophthalmic Plastic Surgery*, Grune & Stratton, 1952, pg. 68.

*509 Medical Arts Building.*



## INTESTINAL OBSTRUCTION OF THE BOWEL IN THE AGED AND THE YOUNG—

### Report of Two Interesting Cases\*

M. J. W. WHITE, M.D.,

Luray, Virginia

The first patient, Dr. F. W. G., age 97½, a retired physician and druggist, was seen at approximately 11:30 P. M. on May 28, 1953, with a strangulated right inguinal hernia. His past history of this hernia could not be obtained but he had not used any particular device to keep it reduced, and had apparently reduced the hernia many times previously without assistance.

On this particular afternoon, after he had been working in the yard of his home, he was unable to reduce the hernia as he had apparently done previously.

When he was first seen he was given 50 mgm. of Demerol by hypodermic and 30 mgm. phenobarbital by mouth. The hernia at this time was tense and approximately the size of an orange. In the following twenty minutes it lost some of its tenseness and, although it still was not reduceable, it was thought that the bowel would return to the peritoneal cavity. However, the next morning it appeared larger and, after consultation, operative intervention was deemed necessary.

The patient at this time was vomiting, with much pain, he had Cheyne-Stokes respirations, and a temperature of 99 degrees. His white blood cell count was 6,400, and an urinalysis was essentially negative.

Operation began at 10:00 A. M. and, under local 2% procain HC1 anesthesia, a right hernia incision was made. When the peritoneum was reached it appeared dark and, upon opening it, old blood with bloody peritoneal fluid and a hemorrhagic loop of small intestines was seen. After approximately 15 minutes, peristalsis was noticed at the edge of the hemorrhagic area of the strangulated loop and, due to the age and condition of the patient, it was deemed advisable to return it to the peritoneal cavity and repair the hernia as quickly as possible. During the repair a white looking tissue, appearing to be fascia, was used to help with the closure. When a suture was placed in this piece of tissue, it bled profusely

and upon closer examination it was found to be the femoral vein. This had to be ligated. Tissue in the aged is not like that in young adults.

The hernia was then repaired in the routine manner, using black silk for the fascia, chromic-O for the underlying tissue, and clips for the skin.

Considering all, the patient stood this procedure fairly well, but his condition was considered poor the following day when 5% alcohol in glucose solution seemed to benefit him most. Caffein and sodium benzoate was given on several occasions as a respiratory stimulant. On the second day following operation, he was able to sit up for short periods, and on the 16th day he walked out of the hospital as good as before the operation.

The second case is that of an eight year old girl, V.A.S. She was seen on the evening of May 18, 1953. This frail, undernourished little girl, appearing younger than her eight years, was examined on the back seat of her father's car. She was on her knees crying with abdominal pain. She felt hot and appeared acutely ill, so she was sent to the local hospital for further examination.

When seen there, she was nauseated, vomited and had crampy colicky pain over the whole abdomen. Her temperature was 99.5, with a white blood cell count of 20,000 consisting of 96% polymorphonucleas, 2% lymphocytes, and 2% eosinophils. The conclusion was reached that she had an acute surgical abdomen and preparations were begun for immediate operation.

At operation, a right rectus incision was made and when the peritoneum was opened, free straw colored fluid was encountered. The omentum appeared thickened, was plastered over the intestines, and was removed with some difficulty. A large well-filled loop of small intestine, which was twisted upon itself, was delivered through the incision and found to contain a mass of ascaris. A small incision was made in the intestine and, with a Babcock clamp, a large quantity of fully developed round worms were delivered—one hundred and twelve in all. Many

\*Read before The Medical Society of Northern Virginia, December 15, 1953.

more could be felt in the other loops of intestines that could not be milked up to this opening and were left. The appendix was then brought into view and appeared edematous and enlarged. It was removed in the usual manner. The abdomen was then

closed in layers without drains after instilling one gram of streptomycin solution.

She made an uneventful recovery, passing fifteen adult ascaris by rectum before leaving the hospital eight days after the operation.

### New Books

The following books have been received recently at the Tompkins-McCaw Library of the Medical College of Virginia and are available to our readers under usual library rules:

- Ashley and Love—Fluid and electrolyte therapy, 1954.  
Bauer—Seventy-five years of medical progress, 1878-1953.  
Bickers—Menorrhagia: menstrual distress, 1954.  
Cantarow and Scheoartz—Biochemistry, 1954.  
Ciba Clinical Symposia, Vol. 5, 1953.  
d' Abreu—Practice of thoracic surgery, 1953.  
Davies and Gale, editors—Adaptation in micro-organisms, 1953.  
DePalma, editor—Clinical orthopaedics, Vol. 3, 1954.  
Doshay—Parkinsonism and its treatment, 1954.  
Feigl—Spot tests, organic and inorganic, Vol. 1, 1954.  
Ficarra, editor—Emergency surgery, 1953.  
Fleming—William H. Welch and the rise of modern medicine, 1954.  
Florey—Lectures on general pathology, 1954.  
Galdston—The meaning of social medicine, 1954.  
Gray—The microtome's formulary and guide, 1954.  
Harrison—Ocular therapeutics, 2nd edition, 1953.  
Harrow and Magur—Textbook of biochemistry, 6th edition, 1954.  
Henderson—Only the happy memories, 1954.  
Hoffman—Biochemistry of clinical medicine, 1954.  
Jenkins—Breaking patterns of defeat, 1954.  
Josiah Macy—Metabolic interrelations, 1954.  
Josiah Macy—Problems of aging, 1954.  
Josiah Macy—Problems of infancy and childhood, 1954.  
Kaplan and Robinson—Congenital heart disease, 1954.  
Lev—Autopsy diagnosis of malformed hearts, 1953.  
Liebolt—Illustrated reviews of fracture treatment, 1954.  
Loewenthal, editor—The eczemas, 1954.  
Mackenna and Cohen—Aids to dermatology, 4th edition, 1954.  
Mackie, et al—Manual of tropical medicine, 1954.  
Main—Physiology, 2nd edition, 1953.  
Major hospital atlas, 1954.  
Markowitz—Textbook of experimental surgery, 3rd edition, 1954.  
Mayo Clinic diet manual, 2nd edition, 1954.  
Meaker—A doctor talks to women, 1954.  
Neurath and Bailey—The proteins, Vol. 1, Pt. A and B, Vol. 2, Pt. 1, 1953-1954.  
Oginsky and Umbreit—Bacterial physiology, 1954.  
Palumbo—Low back pain and sciatica, 1954.  
Pascher, editor—Dermatologic formulary, 1953.  
Penfield and Jasper—Epilepsy and the functional anatomy of the human brain, 1954.  
Pratt—Cardiovascular surgery, 1954.  
Reiman—Pneumonias, 1954.  
Robinson—The psychiatric aide, his part in patient care, 1954.  
Rothman—Physiology and biochemistry of the skin, 1954.  
Roueché—Eleven blue men and other narratives of medical direction, 1954.  
Smith—Alcoholism, 1953.  
Stieglitz—Geriatric medicine, 1954.  
Surrey—Name reactions in organic chemistry, 1954.  
Symposium on protein metabolism, 1954.  
Symposium of the Society for General Microbiology—Adaptations for Infantile Paralysis, Vol. 14, Pt. 1, 1953.  
Transactions of the American Neurological Association, 1953.  
Transactions of the Association of Life Insurance Medical Directors of America, 1954.  
Wiener—Rh-Hr blood types, 1954.  
X-ray, 1953-1954.  
Yearbook of endocrinology, 1953-1954.  
Zdansky—Roentgen diagnosis of heart and great vessels, 1953.  
Johns—Chimborazo Hospital and J. B. McCaw, surgeon-in-chief, 1954. (very interesting pamphlet)

## RECURRENT HEMORRHAGE SECONDARY TO ILEAL DIVERTICULUM\*

PAXTON POWERS, M.D.,

and

KEMP PLUMMER, M.D.,

From the Gastroenterology Section of the Medical Service,  
McGuire Veterans Administration Hospital,  
Richmond, Virginia.

This report is presented with the idea of pointing out certain features of recurrent small bowel bleeding which may be utilized as diagnostic aids, in the presence of negative x-ray findings and a varied, indistinct symptomatology.

In spite of present day improvements in diagnostic endoscopy and radiology, the site of bleeding cannot be determined in about 15%<sup>1</sup> of all cases of gastrointestinal hemorrhage. Localization of the site of hemorrhage is made all the more difficult by the absence of any characteristic pattern of symptoms. This is especially true of lesions in the small bowel distal to the duodenum.

### CASE REPORT

A 25 year old white male mechanic was admitted to the McGuire Veterans Administration Hospital, Richmond, Virginia, for the third time on August 15, 1953, because of recurrence of gastro-intestinal hemorrhage. Gastro-intestinal symptoms began shortly after his entrance into military service. These were characterized by epigastric pain induced by eating. There was no radiation of pain or nocturnal exacerbation. In the same year he had several attacks of fainting and was hospitalized once because of tarry stools. The resulting anemia was corrected by two blood transfusions. He was asymptomatic until March, 1953, at which time he was admitted to McGuire Veterans Administration Hospital, Richmond, Virginia, because of melena which began the day prior to admission. For two weeks preceding this episode of melena he had had dull aching pain in the lower abdomen. The pain seemed to be relieved by passage of flatus or bowel movements. Aside from a weight loss from 145 to 123 pounds, occurring over a two year period, he had no other systemic manifestations.

Sponsored by the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are a result of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

\*Read before the Richmond Academy of Medicine October 27, 1953.

On physical examination his blood pressure was found to be 96/56 and the oral mucous membranes appeared moderately pale. There was localized tenderness to the right of the umbilicus and there was a well healed right lower quadrant scar resulting from an appendectomy in 1943. Both dark and bright blood were found on digital examination of the rectum. There were no other pertinent physical signs. Hemoglobin was 10.9 grams/100 c.c., sedimentation rate 10 mm. per hour, hematocrit 36%, WBC 10,000, with a normal differential count. Studies with reference to blood coagulation showed repeatedly normal results. A barium meal, small bowel series and barium enema were also reported as negative.

Bleeding stopped spontaneously after several days of hospitalization. He was treated empirically on an ulcer regimen. The hemoglobin returned to normal without transfusions. A tentative diagnosis of duodenal ulcer was made at that time on the basis of exclusion of other demonstrable lesions.

Following his discharge and an asymptomatic period of about three months, he had sudden onset of epigastric pain followed in several days by another episode of dark red rectal bleeding associated with pronounced weakness. Again he was admitted to McGuire Veterans Administration Hospital at which time he showed a moderate anemia, and dark red feces was found on rectal examination. The physical findings were otherwise unchanged. Gastric analysis, a repeat barium meal, gastroscopy, proctoscopy and barium enema provided no information as to the cause or site of the hemorrhage.

He left the hospital in remission, which continued for about 6 weeks. In August, of 1953, he became nauseated, and vomited approximately a pint of partially digested food and bile stained liquid without gross blood. He was admitted again and presented essentially the same picture as before including a moderate degree of anemia. That day he passed three bloody stools. Supportive therapy consisted of 1000 c.c. of whole blood and an ulcer regi-



men. The patient improved until one week later when he began to pass tarry stools and there was a rather sudden drop in hemoglobin to 6.4 grams necessitating several more transfusions. A barium meal and a small bowel series again revealed no lesions.

An exploratory laparotomy was performed. A firm, round, well circumscribed mass two cms. in diameter was found about four feet proximal to the ileocecal valve. It was attached to the ileum in close proximity of the mesenteric insertion and adjacent to the mesenteric plane. The peritoneal lining of the mass was smooth and glistening. A segment of the small intestine measuring 12 cms., including the mass, was resected.

Examination of the surgical specimen (Fig. 1) revealed a segment of ileum with a dimple-like orifice in the mucosa approximately in the middle. A

probe could be passed through the orifice into a narrow lumen which could be traced to the center of the spherical mass described above.

Microscopic examination of the specimen revealed a true diverticulum of the ileum (Fig. 2) provided with a well developed muscular coat. The lining of the pit of the diverticulum was composed of typical gastric mucosa (Fig. 3). The lining was ulcerated around the neck of the diverticulum. There was considerable fibrosis of the muscularis beneath the ulceration. There was also some focal lymphocytic infiltration suggesting a relatively indolent inflammatory reaction. A few fairly large blood vessels in the base of the ulcer showed degenerative changes in the wall and organized thrombi in the lumen (Fig. 4). There was also some focal extravasation of blood suggesting recent bleeding. The pathologic diagnosis was: Diverticulum of the ileum con-

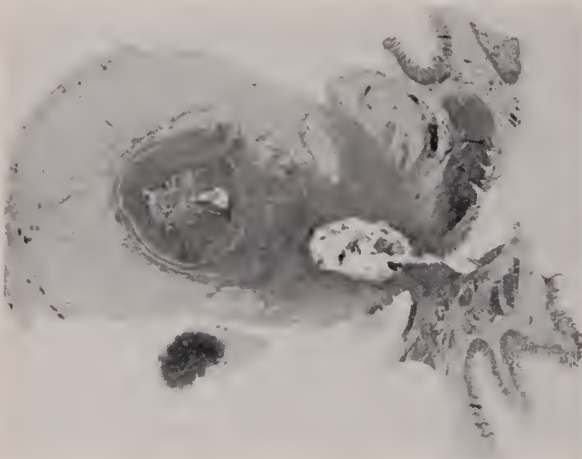


Fig. 1.

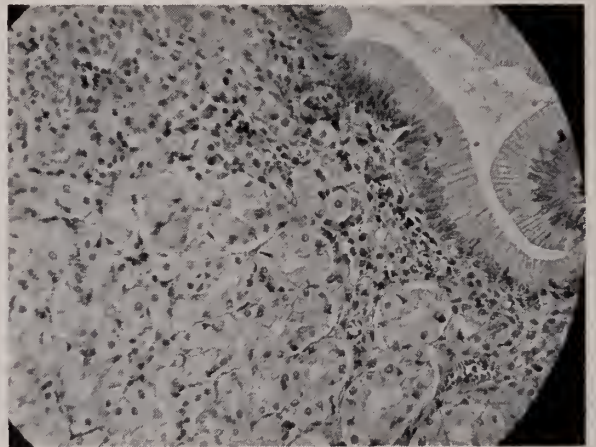


Fig. 3.

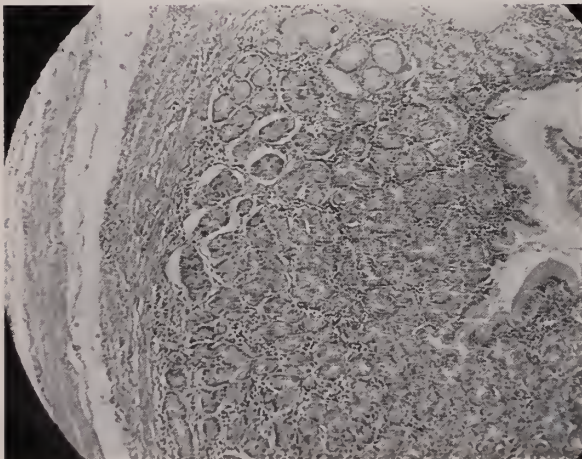


Fig. 2.

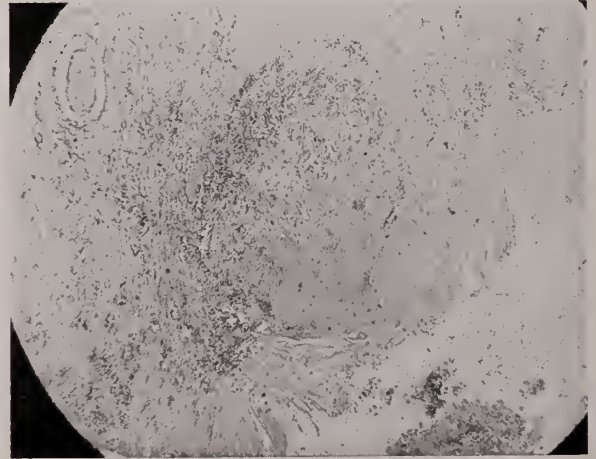


Fig. 4.

taining heterotopic gastric mucosa with a bleeding peptic ulcer.

#### COMMENT

Our case report illustrates the following features:

1. Silent (or asymptomatic) intestinal bleeding associated with indistinct clinical pattern.
2. Alternation of grossly bloody and tarry stools, the former or both frequently being present at some time during each episode.
3. Equivocal or negative x-ray findings that exclude peptic ulceration, intraluminal tumors, diverticula, intussusception or enteritis.
4. Absence of clinical, roentgen or endoscopic evidence of gastroduodenal or colonic disease.
5. The tendency toward spontaneous remission and recurrence often without premonitory symptoms.
6. The absence of hematemesis, particularly in the presence of vomiting.

The diversity of symptoms and signs attributable to Meckel's diverticulum have been well documented. The subjective complaints follow no consistent pattern<sup>2</sup>, and may as well be disregarded. The same appears to be true of a non-Meckel's type of diverticulum<sup>3</sup>. However, if the added feature of repeated hemorrhage of obscure origin is consistent with the clinical points mentioned above, serious considera-

tion should be given to the diagnosis of diverticulum, especially since it occurs in 0.2 to 0.5% of all individuals<sup>2</sup> and not infrequently is the site of ulceration with hemorrhage<sup>4</sup>.

By means of a careful clinical, roentgenologic and endoscopic study in such cases of severe and recurrent obscure gastrointestinal hemorrhage, the foregoing features direct attention to the mesenteric small bowel, and exploratory laparotomy becomes obligatory.

#### SUMMARY

A case of repeated hemorrhage from a diverticulum of the ileum is presented. It exemplifies generally the clinical symptomatology in bleeding of small bowel origin. Certain features are emphasized which tend to implicate such a location.

#### REFERENCES

1. Harrison, T. R.: Principles of Internal Medicine, First Edition, The Blakiston Company, New York, 1950, p. 200.
  2. Bockus, H. L.: Gastroenterology, First Edition, W. B. Saunders Company, Philadelphia and London, 1944, Vol. 2, p. 119.
  3. Dixon, C. F., and Wamgh, J. M.: Non-Meckelian Diverticula of Jejunum and Ileum, *Ann. Surg.*, **118**: 377-393, September, 1943.
  4. Van Ravenswaay, A. C., and Winn, G. W.: Jejunal Diverticula—Consideration of Clinical Symptomatology and Case Report, *Am. J. Digest. Dis.*, **10**: 108-111, March, 1943.
-

## INCIDENCE OF GOITRE IN SOUTHWEST VIRGINIA

J. T. PHILLIPS, JR., M.D.,  
Norton, Virginia

In order to ascertain a more accurate idea of the incidence of goitre in this area, a study was undertaken from routine admissions from St. Mary's Hospital and Norton General Hospital from a period beginning September, 1951, through March, 1953, making a combined total of 10,472 charts reviewed. These were consecutive admissions as obtained from the record room files.

In reviewing these charts the records were thoroughly searched for any mention of goitre, whether it be from the standpoint of a diagnosis made, or whether it was from mention in the physical examination or the history, and not recorded in the diagnosis. An attempt was also made to correlate the physical findings and the diagnosis with the laboratory work. In four instances there was insufficient data to indicate what type of goitre was present. This study included both male and female, white and colored, although the colored admissions were by far in the minority here because of the low incidence of colored people in this section of Virginia. The type of work-up as recorded on the chart has to be taken into consideration in compiling these figures because some physicians were more meticulous about recording the findings of the thyroid gland and the classification of the goitre found. Nevertheless, we felt that this number of cases from two hospitals over an 18 month period would give us an indication of the incidence of goitre and of the predominant type of goitre.

The total number of goitres admitted in this period of time was 55, which is 0.5 per cent of the total hospital admissions. Pennington,<sup>1</sup> in 1942, reported a 10 year survey of goitres admitted to two general hospitals in Lexington, Kentucky. There were 99,314 admissions to the hospitals, 1,153 of these cases being admitted for thyroid disease, not including hypothyroidism or those admitted for basal metabolic rates. This per cent of goitre admissions to total hospital admissions is 1.1 per cent. In this study he states that Central Kentucky is ordinarily not considered in the endemic goitre region. Hayne<sup>2</sup> found goitres in 3.8 per cent of 17,600 people he examined through South Carolina. This, however, was not computed on the basis of patients admitted

to hospitals. In 1939, Mahorner and Barrow<sup>3</sup> reported on 52,863 patients admitted in one year to Charity Hospital in New Orleans, 248 of whom had goitre, being a ratio of 1 to 213 or 0.46 per cent of the total hospital admissions, which is essentially the same figure that is computed for this area in Southwest Virginia on the basis of the present study. Lehman and Shearburn,<sup>4</sup> reporting on 87,661 admissions to the University of Virginia Hospital over a period of 12 years, found 401 surgical goitre patients, which is a percentage of 0.45 per cent of total hospital admissions. Mahorner reports from a study done by other men in 1923, that less than 0.1 per cent of men in the southern states examined for a draft in World War I showed goitre, whereas, in the same draft examinations from 1.5 to 3 per cent of the men from the Northwest and Great Lakes regions were found to have goitre.

From the standpoint of admitting diagnosis, there were 27 patients with the main diagnosis being goitre and 28 patients being admitted where this diagnosis was of secondary importance.

The classification used in determining the type of goitre in these cases was as follows:

- (A) DIFFUSE
  - 1. Toxic
  - 2. Non-toxic
- (B) NODULAR
  - 1. Toxic
  - 2. Non-toxic

Of the diffuse goitres there were 13 cases, and of the nodular goitres there were 39 cases, or a ratio of 1 to 3. The total number of toxic goitres is 16 or 0.15 per cent of the total hospital admissions, or 29 per cent of the total goitre admissions. Davis,<sup>5</sup> in an analytical survey of the goitre management from the University of Nebraska Hospital over a period of years from 1935 to 1944, reports on 551 goitre patients, of which 68.6 per cent had a diagnosis of thyroid toxicosis. The number of non-toxic goitres admitted to our hospitals was 36, that is, 0.34 per cent of the total hospital admissions, or 65.4 per cent of the total goitre admissions, as compared to 28.9 per cent of non-toxic goitre admissions as reported by Davis' survey. The ratio of toxic to non-



toxic goitre is 4 to 9. Hence we have a predominance of nodular non-toxic goitres in this area of Southwest Virginia.

No attempt was made to tabulate the type of treatment which these patients had either surgically or medically. Patients reported as previously having had thyroidectomies totaled 15.

There were 3 malignancies reported, which was 0.03 per cent of the total admissions to the hospital, or 5.4 per cent of the total goitre admissions. As compared to Davis' study, he found 14 patients or 2.5 per cent of goitre admissions that had carcinoma of the thyroid gland.

Pemberton and Haines<sup>6</sup> state that, among patients operated upon for goitre, carcinoma is found in about one per cent of all goitres, whereas, it is 2.5 to 3 per cent of all nodular goitres. Foss and Cooper,<sup>7</sup> in 1000 consecutive cases of goitre, found carcinoma in 24, an incidence of 2.4 per cent. Lahey Clinic<sup>8</sup> finds 10 per cent malignancy in single adenomas. There was one case of Hashimoto's struma.

#### COMMENT

The hospitals from which this study is taken are general hospitals, drawing from a large surrounding area. Although this is a relatively small number of patients as compared to many studies reported, it does bring out some interesting information, namely, that the percentage of toxic to non-toxic goitres admitted in Southwest Virginia hospitals was the reverse of those admitted in other areas, suggesting sectional differences in the type of goitre found.

#### REFERENCES

1. Pennington, W. H.: Goitre in Central Kentucky, *Southern Surgeon*, **11**: 490, July, 1952.
- 2, 3, 4. Mahorner, H.: Goitre in the Southern States, *Surgery*, **16**: 764, November, 1944.
5. Davis, H. H.: Analytical Survey of Goitre Management, University of Nebraska Hospital, 1935 to 1944, *Nebraska State Medical Journal*, **31**: 355, September, 1946.
6. Christopher, Textbook of Surgery, 4th edition.
7. Foss, H. L., and Cooper, A. F.: Recent Trends in the Treatment of Goitre, *Pennsylvania Medical Journal*, **54**: 430, May, 1951.
8. Surgical Practice of the Lahey Clinic, page 71, 1951.

#### The Doctor and His Community

Does your community have medical representation at meetings of groups interested in health and welfare? Doctors must help to solve the local problems of the indigent, the aged, and many others. Strict medical care is no longer enough. Free clinics and charity patients are not enough. Some time must be allotted to citizenship.

Doctors must assume community responsibilities on an every day, part-of-the-group basis. The daily and weekly influence of a doctor upon health policies is of the greatest value to a community (such influence cannot be purchased; when you let Joe

do it, he does it Joe's way). The medical profession has an obligation to furnish leadership in health matters. Doctors must again become leaders instead of being led.

Lacking time for citizenship

the chance for a solution of problems may be taken from us.

Refusing these responsibilities,

we have no right to criticize foreign and exotic policies of health and welfare groups.

—*Public Relations Bulletin, West Virginia State Medical Association.*

## DR. WILLIAM BAYNHAM, OF VIRGINIA A Biographic Portrait

L. BENJAMIN SHEPPARD, M.D.,  
Richmond, Virginia

William Baynham was born December 7, 1749, in Caroline County, Virginia. His father was Dr. John Baynham, who had long practiced in that community and who was a local magistrate. It was under his father that William Baynham began the study of medicine.<sup>1</sup>

At an early age, young Baynham was then "apprenticed" to Dr. Thomas Walker, of Castle Hill, in Albemarle County, regarded as "one of the most eminent men of his day." After spending five "laborious" years with Dr. Walker, Baynham, now twenty years of age, went to London to continue his medical studies. He took courses in medicine at St. Thomas', in London, and also with the Hunters, instead of going to the University of Edinburgh, where a considerable number of young American physicians of that time had received their training. He entered St. Thomas's in 1769. There, Baynham had as professor Mr. Joseph Else, with whom he worked until 1772, devoting much of his time to the study of anatomy.

Upon completion of his course under Mr. Else, Baynham took a position at Cambridge University as "professor in anatomy", assisting Professor Collington, head of that department. At the same time, he was associated with Mr. Slater, a prominent surgeon of Margate, as partner in his practice, which seems to have been both extensive and lucrative. However, Mr. Else had other plans for his former student and persuaded Baynham to come to London to work with him in the "Museum". Here, he taught anatomy, did some dissecting, and prepared specimens for the Museum, later left to him by Mr. Else in his will. He later sold the Museum for 800 pounds to a Mr. Cline and then practiced as a surgeon in London for several years.

In 1785, William Baynham returned to America. On June 7, 1781, he had become a member of the Company of Surgeons of London, which was equivalent

to securing the degree of M.D. In Essex County, Virginia, he now settled as a practitioner of medicine and surgery. His reputation came to draw patients from large cities and he was even sometimes called to other states for surgical cases. He had a national reputation at the time of his death, December 8, 1814.<sup>2</sup>

As a surgeon, Dr. Baynham "particularly signalized himself by several operations for stone, cataract, and extra-uterine conception."<sup>3</sup> A full account of his operations is given in Volume 4 of the *Philadelphia Journal of Medicine and Science*.

Dr. Baynham was eminent both as an anatomist and as a surgeon. As an ophthalmologist, his reputation rests upon his "numerous operations for cataract."<sup>4,5</sup> A letter from "a gentleman of high medical reputation, both in England and in America" states that Baynham was "second to Physick only" in surgery. The writer adds, "Dr. Physick and Mr. Baynham are the only persons whom I know in America, that have really improved the surgical profession."<sup>6</sup>

There are two definite reasons for Dr. William Baynham's not having become a well-known American physician: first, he spent almost all his life, from 1785 on to his death, in the country, in a rather obscure locality; in the second place, he left no writings of any consequence that would compare with the famous 3000-page manuscript of Dr. John Peter Mettauer.

### REFERENCES

1. Blanton: *Medicine in the Eighteenth Century*, p. 79.
2. Thacher: *American Medical Biography*, I: 170.
3. *Philadelphia Journal of Medicine and Science*, IV: 193.
4. Thacher: *Med. Biog.*, I: 171.
5. *Philadelphia Journal of Medicine and Science*, IV: 193.
6. *Ibid.*, page 198.

## PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.  
*State Health Commissioner of Virginia*

### Public Health Aspects of Civil Defense

Major attacks upon the United States by an enemy possessing weapons of modern warfare could produce millions of casualties, making necessary the provision of both medical care and public health services on a scale unprecedented in the history of the world. Already much planning and preparation have gone into the organization of civil defense health services, but much more has yet to be done.

Space does not permit a detailed analysis of many problems involved in providing medical care, but those problems are inexorably intertwined with the public health problems. Basic to an understanding of the health aspects of civil defense is a knowledge of the nature of the threat and the requisites for an adequate defense.

The weapons which must be considered in preparing for health services include biological, chemical, radiological and atomic agents. From a public health viewpoint all can be classified as equally serious. With the advent of the H-Bomb, certain fundamental policies in civil defense medical service must be changed. While the percentage of various casualty types will change little, much greater numbers of casualties can be expected, and a large number of these will be due to the tremendous "fall-out" of radioactive particles, which, as has been proved, can cover several hundred miles. In addition, we must expect greatly increased destruction over large areas, and, since many of our hospitals and professional buildings are located in the heart of target areas, we must expect to lose much of our health facilities and personnel in event of attack. By the same token, buildings selected for emergency hospitals, first aid stations, and even mass care centers will have to be re-evaluated, and in most cases, other buildings selected which will offer greater safety and have less chance of being totally destroyed.

It has been more evident daily that target areas will have to depend upon support areas, as well as those which have been prepared for refugee or evacuation areas. Since we know a M.L.D. of radiation of 300 to 500r could occur over a distance of several hundred miles, we can no longer depend upon a few trained radiological monitoring teams to find and

pinpoint radioactive areas, but must of necessity organize and train sufficient teams to cover the entire state in a manner similar to the ground observer posts. We must also give serious consideration to the immediate dispersal, on warning, of medical personnel.

Federal Civil Defense Administration, with representatives in each large warning center, now advocates, with better plans for warning the populace, that each target area prepare an adequate dispersal plan. The physical geography of the target areas in Virginia makes the preparation of such a plan a formidable project. Virginia is studying such plans, indeed, the Northern Virginia area, working with the District of Columbia and parts of Maryland, are well advanced in how they would go about evacuating that area. Should war become imminent, or be actually declared, the prompt dispersal of the aged, sick and children to mass care centers is almost a "must". With such a tremendously increased welfare problem, the public health program will proportionately increase, especially with regard to milk, water, general sanitation, garbage and sewage disposal, and the control of communicable and venereal disease.

Biological warfare agents include living organisms, toxins, biological products and chemical plant growth regulators, which may be used to produce death or casualties in man, animals or plants. Chemical agents include toxic chemicals, incendiaries, and smokes. Not the least of the chemical agents is nerve gas, and these developments make defense preparations against biological and chemical agents imperative.

Considering man as a target, enormous numbers of casualties result from attack by biological or chemical agents. The correct use of biological agents by saboteurs could cause large numbers of casualties and disruption of local population groups. Saboteur use of chemical agents presents more technical difficulties than biological agents. We can feel sure that an enemy will strike at personnel more intensely than ever before, for such an attack would save the means of production, and leave less men to care for. Also, since B. W. and C. W. agents lend themselves



so readily to sabotage, we can expect an enemy, who, short of all-out war would do anything to achieve his ends, to be prepared to use these agents.

With the foregoing in mind, certain civil measures are essential. Sufficient warning must be given, at least an hour or more, to allow civil protective measures to be taken. Where such warning is sufficient an active dispersal or evacuation plan should be placed in effect immediately, and preparations to short of all-out war would do anything to achieve care for both casualties and evacuees begun. Attack with biological or chemical agents must be detected promptly, radiological monitors alerted, and the public informed of the attack. Proper protective devices, such as gas masks and shelters should be made available. Every individual must know what is expected of him in any type of attack, and should be instructed in the various weapons which may be used, to help them react rationally. Health personnel must be prepared to deal with any emergency situation, plans for utilization of health facilities must exist, and certain medical supplies must be available.

To prepare, medically, for an enemy attack an area should adopt the Boy Scout slogan, "Be Prepared", and the local medical director should arrange classes for the populace in First Aid, Home Nursing, Nurses Aides and general defense orientation. Specific plans for evacuation or dispersal under several types of attack are necessary, the organization of First Aid Stations, Casualty Stations, Emergency Hospitals, expansion of permanent hospitals, mortuary services, mass care centers with medical care assigned, should all be planned and organized well in advance of attack. Special training should be given for radiological monitoring.

Among the civil defense problems with which public health officials will be concerned are the provision of safe water; sewage collection and disposal; garbage and refuse storage, collection and disposal; food sanitation; control of insects and rodents; household sanitation; detection of identification of illnesses; laboratory services; and prophylactic services.

Provision should be made for the emergency purification of water by chlorination and other methods. The public should be advised of measures which can be used during extreme emergencies to provide itself with small amounts of safe drinking water.

Another principal problem will be how to prevent contamination of water and food supplies with sewage from damaged sewers. This contamination may be prevented by such measures as pumping, temporary diversion, and improvised repair. In general, the repair of water systems would take priority over the repair of sewage systems.

To prevent the development of insect breeding and other nuisances, community refuse handling agencies and health departments must plan to maintain certain minimum services: collection of dead animals and other refuse; designation of places for emergency storage (such as vacant lots or bombed-out buildings), with provision for the control of insects, rodents, and odors; and activation of emergency landfill disposal sites to supplement or replace normal disposal facilities.

The civil defense problem in food sanitation is to adapt the normal services of the health department and of the food industry to the dangers which will exist in an emergency. A particularly important task will be the supervision of food preparation at mass-feeding centers. Other tasks include evaluating possible contamination of food supplies by sewage, broken glass, biological, chemical, and radiological agents, and other extraordinary contaminants; implementing arrangements for decontaminating, segregating, or destroying such supplies, and arranging for the orderly opening and closing of restaurants and other public eating establishments in accordance with civil defense emergency feeding needs.

Early detection and identification of illnesses which may result from biological or chemical attacks are extremely important in minimizing the effects of these attacks. Mobile epidemiological teams may be needed to assist local health departments in carrying out epidemic intelligence activities during an emergency. Health departments, particularly in urban areas, should bring their epidemic intelligence services to a high degree of proficiency. Special training should be given to laboratory workers in the use of instruments and techniques for dealing with the chemical agents and exotic organisms that may be used.

The psychological effects of modern warfare must not be overlooked. The weapons used in modern warfare tend to cause much speculation among the public and to engender unreasoning fear in many people. If civilians are to react rationally, they must

have adequate knowledge about the capabilities and limitations of these weapons. If the health departments carry on an educational program of this type, their efforts would be well rewarded in the event of an enemy attack.

The purposes of civil defense health services are (a) to minimize the extent of severity of, and provide treatment for, civilian casualties caused by enemy action and (b) to maintain the health of, and provide emergency non-casualty medical service for, evacuees and other individuals deprived of their usual medical care resources. It is imperative, however, that the normal patient-doctor relationship be reestablished at the earliest possible moment after a disaster so that the current structure for providing health services be affected as little as possible.

With these newer concepts of the medical service in civil defense, it becomes an essential part of our planning for all medical and allied professional people to fully understand these problems, and be

prepared to care for these unfortunates who are either injured or lose their homes. This can best be done by the state societies and their components making these problems a major study in their future meetings.

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	June 1954	June 1953	Jan.- June 1954	Jan.- June 1953
Brucellosis	2	6	17	26
Diphtheria	1	3	25	51
Hepatitis	181	141	2597	1237
Measles	2891	542	22052	+179
Meningococcal Infections	6	7	67	129
Poliomyelitis	12	17	36	37
Rocky Mt. Spotted Fever	5	14	12	22
Streptococcal Infections (Including Scarlet Fever)	283	313	3040	3448
Tularemia	3	0	20	15
Typhoid Fever	7	2	28	19
Rabies in Animals	17	28	225	263

WOMAN'S AUXILIARY  
TO  
THE MEDICAL SOCIETY OF VIRGINIA

- President* ----- MRS. K. W. HOWARD, Portsmouth  
*President-Elect* ----- MRS. MAYNARD EMLAW, Richmond  
*Recording Secretary* ----- MRS. LEE S. LIGGAN, Irvington  
*Corresponding Secretary* -----  
MRS. LEMUEL E. MAYO, Portsmouth  
*Treasurer* ----- MRS. WILLIAM C. BARR, Richmond  
*Publication Chairman* ----- MRS. WM. S. GRIZZARD, Petersburg

American Medical Association.

The Auxiliary was represented by the following members at the national convention held in San Francisco, June 21-25: Mrs. Kalford W. Howard, State President, from Portsmouth; Mrs. Richard M. Reynolds from Norfolk; Mrs. Meyer Vitsky of Richmond; and Mrs. Charles H. Henderson of Norton, president-elect of the newly formed Wise County Auxiliary.

Mrs. Howard gave the report from Virginia and served as a member of the Convention Courtesy Resolution Committee.

Mrs. Reynolds is now serving as National Chairman of Public Relations and participated in the Public Relations Panel on June 21st. As chairman,

she will have four regional chairmen serving under her. She is a past president of the Norfolk County Auxiliary and the State Auxiliary.

The delegates were very faithful in attending all the meetings, luncheons, teas, etc., and we anticipate a more complete report at a later date.

RUTH L. GRIZZARD (MRS. WM. S.)  
*Chairman of Publication*

Danville-Pittsylvania.

This Auxiliary held the spring business luncheon meeting on April 22nd at Memorial Hospital.

Mrs. J. R. Eggleston, chairman of the Philanthropy Committee, reported that an application had been received for the scholarship to cover six months

graduate study in Pediatrics at Children's Hospital, Washington. Upon completion of this course, the nurse is to return to Memorial Hospital. The Auxiliary granted funds to be placed to aid four first year student nurses in training at the Hospital.

Mrs. Cary Whitehead, Chatham, introduced Mrs. Sally Thomas of the Virginia League of Planned Parenthood who presented a film and distributed pamphlets on Planned Parenthood.

Mrs. K. W. Howard, president of the State Auxiliary, was a guest at this meeting and told of the Public Relations work being done by the Auxiliary.

The following officers were elected: President, Mrs. G. F. Thompson, Chatham, president-elect, Mrs. H. R. Bourne, Danville; vice-president, Mrs. W. C. Fitzgerald, Danville; recording secretary, Mrs. Jesse Clore, Danville; corresponding secretary, Mrs. James Beaton, Gretna; and treasurer, Mrs. C. G. Gaddy, Danville.

SALLY W. PRITCHETT (MRS. DRAKE)

*Publicity Chairman*

#### Norfolk.

The newly elected officers of this Auxiliary were installed by Mrs. R. M. Reynolds on May 25th, at the home of the retiring president, Mrs. J. R. St. George. They are: President, Mrs. John Rosenthal; president-elect, Mrs. John Sellers; vice-presidents, Mrs. Robert Thrasher, Mrs. Aubrey Shelton, Mrs. Charles Davis; recording secretary, Mrs. Frank DeLaura; assistant recording secretary, Mrs. Arnold Rawson; corresponding secretary, Mrs. Gordon Harrell; assistant corresponding secretary, Mrs. Andrew Hargroves; treasurer, Mrs. Franklin Turner; assistant treasurer, Mrs. William Pope; historian, Mrs. James Price; and parliamentarian, Mrs. R. M. Reynolds.

Mrs. Rosenthal announced her committee chairman, some of whom are following: Public Relations, Mrs. John Foster; Program, Mrs. Robert Thrasher; Social, Mrs. A. L. Shelton; Health Education, Mrs.

M. I. Krischer; and Future Nurses Club, Mrs. W. J. Kucewicz.

Following the meeting, Mrs. St. George was a charming hostess at a tea for the auxiliary.

HELEN V. KRISCHER (MRS. M. I.)

*Publicity Chairman*

#### Richmond.

The Auxiliary to the Richmond Academy of Medicine had its annual Benefit Tea on May 5th at "Belona Arsenal", historic James River home of Mr. and Mrs. Merle Luck, Sr. The entire proceeds of \$1,130.55 were given to Sheltering Arms Hospital.

Newly elected officers of this Auxiliary are: President, Mrs. James R. Grinels; president-elect, Mrs. George H. Snead; vice-president, Mrs. Carl W. Meador; treasurer, Mrs. George K. Brooks; corresponding secretary, Mrs. J. David Markham; assistant corresponding secretary, Mrs. Levi W. Hulley, Jr.; recording secretary, Mrs. William C. Barr; historian, Mrs. Gilman R. Tyler; and parliamentarian, Mrs. Maynard R. Emlaw.

Standing Committee chairman are: Bulletin, Mrs. Frederick L. Finch; Editorial, Mrs. George H. Snead; Legislative, Mrs. Willard M. Fitch; Membership, Mrs. Custis L. Coleman; Program, Mrs. Carl W. Meador; Public Relations, Mrs. Wm. P. Morrisette; Revisions, Mrs. Edward S. Ray; and Today's Health, Mrs. Wyndham B. Blanton, Jr.

Special Comimittee Chairmen are: Civil Defense, Mrs. Randolph H. Hoge; Devotional, Mrs. Hawes Campbell; Doctors' Day, Mrs. A. A. Houser, Jr.; Drug Collection, Mrs. F. E. Oglesby; Flowers, Mrs. Wm. R. Morton; Luncheon, Mrs. R. F. Simms and Mrs. Wm. A. Dashiell; Mental Health, Mrs. George S. Fultz, Jr.; Nurse Recruitment, Mrs. W. H. Buffey; Personal Relations, Mrs. R. N. Snead; Research and Romance, Mrs. G. G. Ritchie; Telephone, Mrs. W. F. Cavedo and Mrs. W. M. Deyerle; Volunteer Work, Mrs. G. B. Carter; Ways and Means, Mrs. Wm. F. Grigg, Jr.; and Year Book, Mrs. R. N. Baylor.



## MEDICO-LEGAL NOTES

## Medico-Legal Problems in Unattended Deliveries\*

Obstetrical deliveries unattended by a physician or trained midwife can present a variety of medico-legal problems, especially when the deaths of these newborn infants occur. The question of the means and manner of death must be resolved. Infanticide is to be ruled out.

In the investigation of deaths of unattended newborn infants the testimony of the mother often plays an important role. The reliability of this testimony must be evaluated. Aside from any willful concealment or misstatement of fact, there is the question of the psychic state during delivery. Is the mother oriented as to time and place? In attended deliveries the wide use of amnesic and hypnotic drugs certainly clouds the maternal mental picture. There is no evidence however, that, in the absence of overt psychosis, there is any diminution in the mental acuity of the mother, except in some cases of eclampsia.

It is doubtful that unrecognized delivery of an infant weighing 3 Kg. or more can occur in a mentally competent individual. In multipara with markedly relaxed soft parts and strong uterine contractions, labor can be extremely rapid and effortless, and it is conceivable that in an inattentive individual an unrecognized delivery might occur.

Was the infant stillborn or born alive? This is a question for which the law requires an exact answer. The 28th week of gestation is considered the lower limit of viability. This is readily ascertained by the length, 35 cm., and the weight, 1000 grams (2.2 lbs.). Reasonably definite opinion can be rendered in two types of cases: 1) the child which plainly died in utero—the macerated fetus—and 2) the infant which obviously breathed and lived—with lungs more or less fully aerated. The third class, the child which has struggled for existence, presents the most common forensic problem. It is important to differentiate between the stillborn infant which made its struggle before delivery and the live-born infant which failed to survive despite its efforts to breathe. Similar gross changes are seen in both cases.

The lungs will fill the pleural sacs in at least

three-fourths of the cases. The common belief that they are unexpanded in the stillborn is a fallacy. Fetal respiratory movements begin in utero even as early as the third month of gestation. The hydrostatic or floating test may be unreliable as an indication of separate existence. Careful histologic study of the lung is the most reliable aid in solving this problem and even its interpretation can prove quite difficult on occasion.

Having established that live birth occurred, the question of violence must be explored. Wounds of sharp instruments, strangulation, suffocation, and multiple severe injuries are similar to those in other cases. The question of head injury requires careful study as the head is that part most susceptible to birth trauma. Cephalic hematoma cannot be considered as evidence of external trauma. Subdural hematoma and linear skull fractures are seen in apparently normal deliveries. These events are more prone to occur if the infant is premature or if the labor is rapid and precipitous. If fractures are depressed and comminuted and are associated with brain damage, blunt injury must be considered. Often it is claimed that precipitous delivery results in the infant falling to the floor and receiving a fatal head injury. Whether or not this plea is accepted will depend upon a careful investigation into the facts of the case. Points worthy of attention are the parity of the mother, the nature of the fatal injury, the distance of the alleged fall, the quality of the surface struck, and the presence or absence of any evidence pointing to a willfully inflicted blow.

Did the infant bleed to death? A pale body with dry tissues and low blood volume will cause this question to be raised. 100 cc of blood, rapidly lost, may prove fatal. Possible sources of fatal hemorrhage are laceration of the liver, willfully inflicted wounds by sharp instruments, and the umbilical cord. Can the cord become torn during delivery to produce a fatal hemorrhage? The tensile strength of the normal cord was found by Stowe to be from 8 to 15 pounds. This would seem to preclude any spontaneous tear unless there were some pre-existing defect. If such an accident should occur it is unlikely that fatal hemorrhage would ensue as hemo-

\*Contributed by John L. Thornton, M.D., Medical Examiner for the City of Richmond.

stasis is relatively rapid in a jagged lacerated wound. Everyday examples of this are seen in deliveries by other mammals. However if the cord is *cut* and not tied or tied loosely, the danger of fatal hemorrhage is quite real. Willful neglect of proper ligature of the cord has been reported as a means of infanticide.

Congenital anomalies, Rh incompatibility, and

infections are other causes of neonatal death to be excluded.

All information available in cases of unattended deliveries with associated infant death must be carefully considered in order to bring to light cases of infanticide and, even more important, to relieve the innocent of any undue suspicion.

## BOOK ANNOUNCEMENTS

**Fifty Years of Medicine.** By LORD HORDER, G.C.V.O., M.D., F.R.C.P. Philosophical Library, Inc., New York. 1954. 70 pages. Price \$2.50.

**The Atom Story.** Being the Story of the Atom and the Human Race. By J. G. FEIBERG, M.Sc. With illustrations by Lewis and a foreword by Frederick Soddy, F.R.S. Philosophical Library, New York. 1954. 243 pages. Price \$4.75.

**Peripheral Circulation in Man.** By G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.Ch., and JESSIE S. FREEMAN, M.B., B.S., D.P.H. Assisted by Joan Etherington. Editor for the Ciba Foundation. A Ciba Foundation Symposium. Little, Brown and Company, Boston. 1954. xi-219 pages. With 72 illustrations. Price \$6.00.

**The Deaf and Their Problems.** A Study in Special Education. By KENNETH W. HODGSON, M.A. (Cantab.) With a Preface by Sir Richard Paget, Bart. Philosophical Library, New York. 1954. xx-364 pages. Price \$6.00.

**Beyond the Germ Theory.** The Roles of Deprivation and Stress in Health and Disease. IAGO GALDSTON, M.D., Editor. A New York Academy of Medicine Book. Health Education Council, New York and Minneapolis. 1954. viii-182 pages. Price \$4.00.

**You and Your Health.** By EDWIN P. JORDAN, M.D., Charlottesville, Virginia, Executive Director, American Association of Medical Clinics. G. P. Putnam's Sons, New York. 1954. xiv-296 pages. Cloth. Price \$3.95.

Dr. Jordan has presented the laity with a modern version of the home medical handbooks our great grandparents used. Actually, the book is an answer to the many questions that readers have posed him in his syndicated newspaper column on health.

Divided into several sections, each concerning a general system like cardiology, the book explains some elemental physiology and pathology. At the end of each section there are answers to pertinent questions that Dr. Jordan has received. The reader is sometimes advised on simple corrective measures,

and he is always referred to a physician if these fail or if danger signs are present. Our Charlottesville author dispels many erroneous notions, and he clarifies others. His section on cancer is appealing because he offers encouragement to those who seek advice early. Although occasional errors of fact occur, they are rare and not serious. Furthermore, if the book be widely read, it is believed that doctors will not be troubled so much by inconsequential questions, leaving them more time to devote to healing the sick.

ROBERT A. ABERNATHY, JR., M.D.

**Salt and the Heart.** By EDWARD T. YORKE, M.D., Linden, N. J., Attending Cardiologist, Alexian Brothers Hospital; Associate Cardiologist, St. Elizaoeth Hospital; etc. Drapkin Books, Linden, N. J. 1954. xi-83 pages. Cloth. Price \$3.45.

In this book for laymen, Dr. Yorke draws forceful attention to the role of salt in diseases related to the heart. He explains in fairly simple language why salt must be restricted in some patients, and he shows how simple dietary measures may keep patients comfortable for long periods of time. However, the most commendable feature of this work is the large section dealing in detail with the amounts of sodium found in individual foods. He outlines an attractive 200 milligram sodium basic diet; foods may be exchanged according to a sodium point system, much like the popular diabetic exchange system. Physicians can regulate sodium intake with a fair degree of confidence that the diets will be appetizing and followed. Regardless of the occasional admittedly controversial subjects, this book should be a boon to patients and doctors alike.

ROBERT A. ABERNATHY, JR., M.D.

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### ADMISSION TO MENTAL HOSPITALS\*

About three years ago an article appeared in this Journal describing the commitment procedures and the method of voluntary admission to mental hospitals and State colonies. It may not be a-miss to recapitulate the major points at this time, limiting this article to admission to State mental hospitals. The mental hospitals are for mentally ill, inebriates and drug addiction patients; persons with mental deficiency and/or suffering from epilepsy are to be sent to the appropriate colony.

### VOLUNTARY ADMISSION

This method of admission is for persons seeking release from mental distress or "nervousness", just as persons seeking release from physical pain and discomfort go to a general hospital. Still, there are some criteria which must be met:

1. The patient must be considered suitable for voluntary admission by the superintendent of the State Hospital or one of his staff physicians on his authorization. The local physician is not privileged to decide whether a patient may be admitted voluntarily. Basically the conditions are that the patient desire hospitalization, so that he may cooperate with the physicians in his treatment; and that he understand that he is coming to a State supported institution which is for patients with mental disturbances. The paper must be signed without duress in the presence of the admitting doctor.

2. These patients are not kept under obligatory confinement; they can be released at any time with the consent of the superintendent; they will not be held more than 10 days following the receipt by the superintendent of their written request to leave the hospital.

3. This type of admission is only for those who are mentally ill. The law (Sec. 37-113) specifically states "... any suitable person . . . in the early stages of being mentally ill . . .". This definition bars the admission of inebriates and drug addicts on a voluntary request.

4. The person applying for voluntary admission must be a legal resident of the State. This is also

stated in the above mentioned Section (37-113) "... who is a legal resident of the State. . .". There is a Section (37-119) which states further, "No non-resident . . . person shall be admitted or detained in any hospital . . . except when there is a vacancy. . .". With all the hospitals over-crowded, 25 to 30 percent over specified capacity, it is considered that the "no vacancy" sign hangs out.

5. A Voluntary patient "... shall be required to defray his expenses . . ." while in the hospital unless exempted from such payment by the State Hospital Board. (Sec. 37-116 & 37-117).

### TEMPORARY ADMISSION, WITHOUT COMMITMENT

1. This type of admission is for persons who are not cognizant of the desirability of treatment for them in a mental hospital. But if in the opinion of *two physicians* they should be under observation and treatment in such a specialized hospital, they may be admitted on papers signed by these two physicians. Patients admitted in this manner may be released at any time within the 45 day limitation, if their condition is sufficiently improved. If they are so released within this observation period, there is no record in any court that they have been in a mental hospital, and there are no legal complications such as losing their civil rights.

2. The period of "... care and treatment. . ." is limited (Sec. 37-106) to a period "... not to exceed 45 days." However, (Sec. 37-109) if the person so admitted "... is found to be mentally-ill, epileptic or mentally-deficient within 45 days after he is admitted to the hospital or colony . . .", the superintendent shall notify the judge or trial justice of the county or city from which the person was received. If the judge or trial justice is satisfied that the patient should remain in the hospital, he signs an order completing the commitment, "Order of Commitment from Temporary Care and Treatment", Part I (c).

In this way the "regular commitment" is completed and the *sanity commission*, which is composed of *two physicians* and *one judge*, is completed, by the two physicians requesting the temporary admission and by the judge who orders the indefinite commitment. It is only after this commitment procedure

\*Article prepared by E. Beamer Maxwell, M.D., Clinical Director Eastern State Hospital, Williamsburg, Virginia.



is completed that any record is placed on file in the courthouse.

3. It is stated in Part I (a) of the "Temporary Admission for 45 Days Without Commitment to the State Hospitals", that this type of admission is for a "... person who is a legal resident of Virginia ...".

4. No inebriate or drug addict can be accepted by the hospital on this Temporary Admission as it is specifically so stated in Section 37-104.

5. The superintendent may refuse to admit a patient upon such certificate if in his judgment the reasons given are not sufficient, or if the mental condition of the patient is not of such nature as to make it necessary that he should receive hospital treatment. (Sec. 37-107) This will certainly happen very seldom, but it is of assistance to have adequate information concerning the immediate reason for hospitalization.

6. There are special forms for this type of admission which are printed on green paper. It must be accompanied by Part II, the "Interrogatories and History and Physician's Examination", which is a double white paper form to be completed by the physicians.

#### COMMITMENT FOR OBSERVATION

1. This type of admission is similar in many ways to the "Temporary Admission", except that the papers are signed by only *one physician* and by a *judge* of any circuit or corporation court, or any trial justice.

2. There is a time limit of 45 days that a person may be detained in the hospital under this commitment.

3. These papers also are limited to a person "... who is a legal resident of the State." (Sec. 37-99).

4. This type of commitment is not to be used for inebriates or drug addicts. (Sec. 37-99).

5. A person committed for observation may be placed on regular commitment as mentally-ill, epileptic or mentally-deficient by the judge or trial justice originally acting in the case. (Sec. 37-102). The judge is advised of the mental condition of the patient by the superintendent of the State hospital and one or more physicians of the hospital staff, and the judge then completes the form "Order of Commitment from Observation".

6. The "Commitment for Observation" is also printed on green paper and must be accompanied by Part II, Interrogatories.

#### REGULAR COMMITMENT

1. Regular commitment is without a time limit. The commission consists of a *judge* or trial justice, or special justice who has been appointed, and *two physicians*.

2. The forms required are kept by the clerks of the circuit and corporation courts of each county and city. (Sec. 37-67).

These forms are of different colors for the different types of commitments:

For the mentally-ill—pink

For inebriates—canary

For drug addicts—tan

Each of these must be accompanied by Part II, the Interrogatory and History and Physician's Examination.

It is important that the correct paper be used since many laws applying to mentally-ill persons are not applicable to those committed as inebriates or drug addicts. Of significance in this respect is the fact that inebriates and drug addicts do not lose their civil rights, although if they remain in the hospital 30 days or more, they lose their permit to drive a car.

Whatever type of admission is used, the patient must be admitted to the hospital within thirty days of the decree, or the commitment becomes null and void. (Sec. 37-132.1).

It is most important that the correct name of the person being committed be given: In the case of women, it should be her own given name and not the first name of her husband. This is because whatever name appears on the order of commitment which is signed by the judge, is that person's official name in the hospital. This cannot be changed except by court decree, for any purpose. Incidents have occurred where patients or relatives gave nicknames or other than the true and correct name and the patient was so committed. Later when efforts were made to complete insurance forms, much difficulty was encountered by the family. It is also important that a sufficiently complete name be given for identification purposes, as many persons have similar or even, if given briefly, identical, names.

Many legal complications may develop from a carelessly completed form of commitment. The deprivation of a mentally-ill person of his liberty and civil rights is a serious situation, and the papers should be completed as conscientiously as any other legal document.

## NOTES ON PULMONARY TUBERCULOSIS\*

### What Is A Reportable Case?

The Virginia State Health Department accepts as reportable *any* case *designated* by the attending physician as tuberculous, irrespective of criteria used or tests made to reach this conclusion. One might say, therefore, "to diagnose is to report"; and, carried one step further, "to *treat* as tuberculous, is to *diagnose* as tuberculous".

Exceptions to these rules, and therefore *not* reportable, are the "healed primary" tuberculous infections generally, with particular reference to calcific nodules in the lung or hila, thought to have been deposited as a result of an antecedent primary tuberculous infection. (These calcifications may or may not be associated with a known positive tuberculin reaction).

On the other hand, any primary tuberculous infection characterized by enlargement of mediastinal glands to an arbitrary point where the infection is considered by the attending physician to be "unhealed" (and therefore, *active*), *is* reportable, in and of itself, even in the absence of visible co-existent pulmonary lesions.

A positive tuberculin reaction alone, not known to have been recently acquired, is not reportable as a case.

However, a *proven recent* conversion from a negative to a positive tuberculin reaction, whether *or not* this finding is concurrently, or shortly thereafter becomes, augmented by visible x-ray findings characteristic of an unhealed primary infection should, in the opinion of the Virginia State Health Department, be reported as an "active primary tuberculous infection"; moreover, for practical purposes it should be regarded as potentially communicable (culture on gastric washings) until the lesion can qualify for reclassification as apparently inactive or "healed."

Pleurisy with effusion, where tubercle bacilli cannot be isolated and where no other etiology can be established, is often, and rightly *treated*, and *automatically* therefore, *diagnosed* as tuberculous; it is reportable.

Tuberculous pleurisy, particularly with effusion, is thought nearly always to be secondary to an underlying concurrent pulmonary lesion, whether visible or not on x-ray following withdrawal or absorption of fluid; therefore when reported, these cases which

lack roentgenological evidence of pulmonary disease, had best perhaps be classified *arbitrarily* as "minimal, active pulmonary tuberculosis with pleurisy (and effusion)". It is sound medical practice to treat these patients first and foremost for the *pulmonary lesion*; this invariably extends the treatment period *long past* the disappearance of fluid and other symptoms.

It is suggested that healed pleurisy (thickened pleura) be not reported unless the patient gives a definite and comparatively *recent* history of tuberculosis for which he *took treatment*, or which was accompanied by a *positive sputum*. In the latter instances, the cases are reportable as "pulmonary tuberculosis, apparently inactive", provided clinical evaluation studies, subsequently performed, bear out this conclusion.

Clearly there can be no *absolute* criteria for the reporting of a case of tuberculosis until criteria used by attending physicians and clinics for the making of diagnoses have become standardized and universally applied. Currently these criteria vary widely—*too* widely. For example, diagnoses of tuberculosis on the basis of one x-ray alone, without supporting evidence, continue to be made. While this practice is not recommended (see March issue, Virginia Medical Monthly) whenever such diagnoses *are* made, the cases are reportable. As far as the Virginia State Health Department is concerned when a physician *thinks* a patient has tuberculosis, he *has* tuberculosis; health department personnel have been instructed to assume that "the physician is always right", "theirs" not to question *why* a diagnosis is made. In this way only can the State Health Department keep faith with the profession and assure its members the complete cooperation which is theirs' to command.

Currently about 3.4% of reports received by the State Health Department on newly diagnosed cases of tuberculosis are submitted directly by private physicians (whether general practitioners or specialists).

Many, many specimens of sputum from patients cared for by private physicians are sent to the State Laboratory for examination. Some physicians understandably may have considered it to be superfluous to formally report to the health department

\*Prepared by Virginia State Health Department.

a case whose sputum has been declared positive for acid fast bacilli—particularly if he is under the *correct* impression that State and Local Health Departments receive duplicate copies of these reports and enter the patient's name categorically upon their tuberculosis registers.

It is true that, from a practical standpoint, almost all diagnoses so entered are confirmed sooner or later locally, even if not reported by the physician directly, when confirmed. However, it is also an established fact that not *every* patient having sputum from which acid fast organisms can be recovered by direct examination, has tuberculosis. Actually therefore, it would be more *realistic* if diagnoses were made and case reported only after the local physician, in charge of the case, has had an opportunity to correlate the report of a sputum containing organisms of the appearance and with staining qualities "characteristic" of tubercle bacilli, with other facts in the case, the same as he is already being encouraged to do with respect to x-ray reports of shadows "characteristic" of tuberculosis.

If this suggestion ultimately proves to be practicable, as indeed it should, *all* cases would then be diagnosed locally, by the attending physician. The latter is the logical one to report, for generally he is the only one who has or *should* have all the information, upon which to base a diagnosis. The laboratory technician knows nothing but the sputum status; the roentgenologist more often than not, does not have collateral information necessary to render a diagnosis, nor does he pose as a clinician; even the specialist when asked to review the evidence and perhaps independently examine the patient, "in consultation", merely acts in an advisory capacity, offering an opinion which the physician in charge of the case is free to accept or reject. The fact that the attending physician usually and wisely accepts assistance from those prepared to bring their broad clinical experience to bear upon unusual or especially difficult diagnostic problems, does not alter the basic fact that it is still the attending physician whose responsibility it is to make the final decision; it's *his* patient.

Under these suggested circumstances, it would be natural for the attending physician to report the case *direct* to his local health department, rather than indirectly, through the State Health Department. The average attending physician already has established a close working relationship with his local health agency.

The *local* health department is the only one prepared to cooperate professionally and *promptly* with the physician in his management of the many problems medical and para-medical, which invariably follow in the wake of diagnosis, where the tuberculous lesion is classified as active (in need of treatment). Therefore, it is *logical* to notify the *local* health department *first*; in turn it will notify the State.

Most cases of tuberculosis, in the not too distant past, being very communicable by the time they were diagnosed, caused the disease to be looked upon as uniformly and heavily infectious. It is still properly classified, without qualification, as a communicable disease, and as such is reportable in all states.

A few states no longer require the reporting of other than active cases. The Virginia State Health Department however, along with many other states continues to regard as reportable all newly diagnosed cases *whether classified as active or not*. Obviously, this latter method of reporting provides a *more complete* picture for statistical evaluation and epidemiological analysis. To compensate Local Health Departments for the far greater number of cases subject to registry by this method the Virginia State Health Department does *not* urge as a public health measure the routine examination of contacts to other than active cases. In this way it is possible "to have our cake and eat it too!" i.e., a combination of unrestricted reporting, plus freedom to concentrate Public Health Nursing supervision where it is needed most. Allegedly more than half of the newly diagnosed cases of tuberculosis, first singled out for clinical evaluation by x-ray screening of community-wide populations, are apparently inactive, (and therefore presumably noncommunicable) at time of diagnosis.

In order to make possible a serious effort upon the part of communities, states and nation, during the next 10 years or so to *eradicate* tuberculosis as a serious public health problem, it goes without saying that programs must be intelligently organized, existing facilities fully exploited, available funds wisely expended. This can be accomplished only through a knowledge of the total scope of the tuberculosis problem, *including where the individual cases are*. *All cases must be reported, if a job is to be done*. The practicing physician *owes this to his community*, as well as to *himself* and to his profession!



## EDITORIAL

## Dr. Walter B. Martin

THREE years ago Dr. Walter B. Martin of Norfolk, Virginia, gave up tennis for the slower pace of golf. Other than that, the 66-year-old internist who is serving as 108th president of the American Medical Association for the year beginning in June (1954) shows no signs of retiring to the old rockin' chair.

One of the nation's most distinguished men in his field and a top-ranking authority on medical and hospital matters, Dr. Martin was born at Pulaski, Virginia, on January 16, 1888. He was the ninth of 10 children.



DR. WALTER B. MARTIN

The elder Martin, David, had accumulated a good library over the years which became the educational backbone of his children. In 1891, the family moved to Glade Springs, so that the girls—there were seven—would be closer to a women's college. As the girls completed their education they took over the primary teaching of the younger children.

Between his reading and what Dr. Martin describes as the "coaching" of his sisters, he was able to enter the Virginia Polytechnic Institute at Blacksburg, where he obtained his bachelor of science degree in analytical chemistry in 1909. After teaching chemistry and mathematics for three years at the Norfolk Academy, a day school for boys, he began his medical studies at Johns Hopkins University, Baltimore, Maryland,

in 1912. Here he obtained his medical degree in 1916, after making Phi Beta Kappa and Alpha Omega Alpha, the honorary medical fraternity.

Dr. Martin taught in public night school and worked at various other jobs to finance his formal education. His experience as a wage earner began at 14 when, because of sickness in the family, he took a job as a hotel night clerk in a small town at \$10 a month. Subsequently he was employed by two railroad construction firms and a chemical manufacturing plant, boosting his income to \$35 a month.

During his college years he also organized and served as scoutmaster of Boy Scout troops in Norfolk and Baltimore. The only ornamentation in his office today is a small, imitation bronze statuette of a Boy Scout which was presented to him by the Baltimore troop, a group of newspaperboys from the Locust Point section, when he joined the Army in 1917 as a Medical Corps lieutenant.

Dr. Martin served as assistant division surgeon of the 14th Division, whose ranks were decimated by the flu epidemic as they were about to embark for overseas duty. He was discharged in 1919 as a captain and immediately went to Norfolk to begin the private practice of medicine.

In 1942, he set aside the extensive practice he had built up to serve again in the Army Medical Corps, this time as a colonel. At 54, he vigorously sought and finally obtained an overseas assignment to the 10th Army in the Pacific. Before this 14 months tour of duty, including service on Okinawa, Peleliu and Saipan, he served as chief of medicine at Percy Jones Hospital in Battle Creek, Mich., and as medical consultant to the Fifth Service Command.

Between the two World Wars, Dr. Martin had established himself as a church and community leader in Norfolk, and, after his discharge in 1946, he went back to his many activities as diligently as before.

For many years he had served as a deacon of the First Presbyterian Church of Norfolk and in 1953 was named an elder. In 1935, he was a prime mover in organizing the Tidewater Hospital Service Association, a not-for-profit group that sells hospital and medical care insurance, and in helping to put across a city ordinance providing for the pasteurization of milk. He is credited with "creating" in 1939 the Norfolk Hospital Association, which excludes politicians from the administration of city and state funds for the hospitalization of indigents. More recently, he served as chairman of a commission that restored to full operation the Community Hospital of Norfolk. For several years he was chief of medicine at St. Vincent de Paul Hospital and is now medical consultant.

Now a member of the Hoover Commission's Medical Task Force, Dr. Martin is also attending specialist to the United States Public Health Service Hospital in Norfolk and civilian consultant to the Army Air Force and honorary consultant to the Navy Medical Corps.

Immediately following World War II, he was one of three men assigned by the government to tour Army hospitals in Germany and make recommendations for a suitable training program.

He is a past president of the Norfolk County Medical Society, The Medical Society of Virginia, Seaboard Medical Society, Norfolk Community Chest, and Norfolk Hospital Association. He was a regent of the American College of Physicians for several years and first vice president of the college in 1953. He is a member of the Southern Medical Association, American Clinical and Climatological Association, American Society of Clinical Pathologists, American Association for the Study of Allergy, American Association for the Study of Rheumatism, and a diplomate of the American Board

of Internal Medicine. Other memberships include Nu Sigma Nu and the Norfolk Country Club.

Dr. Martin has served the American Medical Association as a member of the house of delegates from 1936 to 1945, member of the Council on Medical Service from 1945 to 1950, member of the board of trustees since 1946 and its executive committee from 1950 until he became president-elect in 1953. During the national educational campaign against socialized medicine he served as a member of the coordinating committee. Early in 1950 he was chairman of an A.M.A. committee which made a study of and reported on the results of the National Health Act in Great Britain.

His basic concept of a physician's duties may be summed up by the following excerpt from one of his talks:

"The physician should be interested in and responsible for the total health of his community. He should be active in his professional society, in his place of worship and in his community welfare agencies. He cannot, of course, 'cover the waterfront,' but if he selects one or more of these activities he will be a better doctor, with a broader outlook on life and its total responsibilities."

---

## SOCIETY PROCEEDINGS

---

### **Accomack County Medical Society.**

This Society met on June 10th at the home of Dr. William Clay Fritz who presented two moving pictures—Early Diagnosis of Uterine Cancer and The Therapeutic Use of Cortone and Cortisone.

Dr. Belle DeCormis Fears, Accomack, is president of this Society and Dr. James Corbin Doughty, Onancock, is secretary-treasurer.

### **Alleghany-Bath Medical Society.**

At the annual election on May 26th, held at Hot Springs, the following officers were named: President, Dr. S. G. Miller, Covington; vice-president, Dr. W. P. Gilmer, Clifton Forge; and secretary-treasurer, Dr. R. P. Hawkins, Jr., Clifton Forge (re-elected).

### **Rockbridge County Medical Society.**

Dr. Thomas B. Hedrick, Buena Vista, was recently elected president of this Society. Dr. E. W. Bosworth, Lexington, is secretary.

### **Fauquier County Medical Society.**

At a meeting on June 15th, the following officers were elected: president, Dr. Frank Folk, Warrenton; vice-president, Dr. Sam Adams, The Plains; Dr.

John Ringler, Manassas, and Dr. Walter Nicklin, Warrenton; and secretary-treasurer, Dr. Evan Ashby, Jr., Remington.

### **The Tazewell County Medical Society**

Met on June 16th at the River Jack Restaurant, Tazewell, with the president, Dr. W. R. Strader, presiding. Dr. G. D. Vermilya, Richlands, presented a paper on "Gastric Polypsis".

Dr. Mary Elizabeth Johnston is secretary-treasurer of this society.

### **Wise County Medical Society.**

Dr. T. J. Tudor, president, presided at a dinner meeting of this Society, held at the Norton Hotel, Norton, on June 9th. Dr. Louis Aaron, Grundy, presented a paper on "Treatment of Fractures by Intramedullary Pins", and this was discussed by Dr. James Williams, Richlands.

A business session followed at which discussion was held on Hospitalization Insurance Plans, the establishment of convalescent and old age homes, and the rapid rise in rates for malpractice insurance. A schedule of fees for medical services was presented and approved by the Society.

Dr. Leo N. Kirch is secretary of this society.



## NEWS

### CALENDAR OF COMING EVENTS

ANNUAL ASSEMBLY IN OTOLARYNGOLOGY—University of Illinois College of Medicine—Chicago, September 6-11

AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION—Washington, D. C., September 6-11

AMERICAN ASSOCIATION OF BLOOD BANKS—7th Annual Meeting—Shoreham Hotel, Washington, D. C., September 13-15

THE MEDICAL SOCIETY OF VIRGINIA—(Annual Meeting)—First Interstate Scientific Assembly—Shoreham Hotel, Washington, D. C., October 31-November 3

SOUTHERN MEDICAL ASSOCIATION—St. Louis, Missouri, November 8-11

#### A Word to the Wise.

The 107th annual meeting of The Medical Society of Virginia, known this year as the First Interstate Scientific Assembly and jointly sponsored by the Medical Society of the District of Columbia, is now less than three months away. Beginning October 31, and running through November 3, the Assembly will be held at Washington's Hotel Shoreham, and without question will be one of the most interesting scientific meetings ever held in this area. Only a joint meeting of this kind could bring you such a varied and informative program.

It is now, of course, too late to secure a reservation at the Shoreham. However, the Society has been promised 200 rooms at the beautiful Sheraton-Park Hotel—just across the street from the Shoreham and certainly one of Washington's finest. There are approximately 100 rooms still available, so please make your reservations now. Washington during November is truly delightful, and the well rounded program has been planned especially for you!

Remember—a word to the wise is sufficient!

#### American Medical Association.

Dr. Walter B. Martin, Norfolk, was installed as the 108th President of the American Medical Association at its annual meeting in San Francisco, June 21-25. The installation took place on Tuesday night and was covered by the full ABC radio network and on a local television channel.

Dr. Elmer Hess, Erie, Pa., was named president-elect and Dr. Clark Bailey, Harlan, Ky., was elected vice-president. Dr. David B. Allman, Atlantic City, and F. J. L. Blasingame, Wharton, Tex., were re-elected to the Board of Trustees. Other officers re-

elected were Dr. George F. Lull, Chicago, secretary; Dr. J. J. Moore, Chicago, treasurer; Dr. James R. Reuling, Bayside, N. Y., speaker; and Dr. Vincent Askey, Los Angeles, vice-speaker.

Dr. J. Morrison Hutcheson, Richmond, was named as a member of the Judicial Council, one of the most responsible of all AMA assignments.

At the end of the last day of the meeting, 12,063 physicians had registered, with the grand total of all registrants as of closing time on the third day standing at 34,224.

The following members of The Medical Society of Virginia were registered through the fourth day:

Dr. Vincent W. Archer, Charlottesville  
 Dr. H. G. Armstrong, Harrisonburg  
 Dr. B. Herman Bailey, Yorktown  
 Dr. F. Clyde Bedsaul, Floyd  
 Dr. William Bond, Richmond  
 Dr. Calvin T. Burton, Roanoke  
 Dr. Charles M. Caravati, Richmond  
 Dr. Edward P. Cawley, Charlottesville  
 Dr. Galen A. Craun, Harrisonburg  
 Dr. Frank Curran, Charlottesville  
 Dr. M. D. Delaney, Alexandria  
 Dr. P. B. Echols, Lynchburg  
 Dr. E. H. Edmunds, Lynchburg  
 Dr. Charles J. Frankel, Charlottesville  
 Dr. Harry M. Frieden, Norfolk  
 Dr. J. A. Gallant, Richmond  
 Dr. John H. Gilligan, Arlington  
 Dr. Robert D. Glasser, Norfolk  
 Dr. James A. Gooch, Alexandria  
 Dr. Hugh J. Hagan, Roanoke,  
 Dr. C. L. Harrell, Norfolk  
 Dr. Charles H. Henderson, Norton  
 Dr. Paul S. Hill, Harrisonburg  
 Dr. William H. Hotchkiss, Broadway  
 Dr. K. W. Howard, Portsmouth

Dr. J. Morrison Hutcheson, Richmond  
 Dr. Edwin P. Jordan, Charlottesville  
 Dr. E. L. Kendig, Richmond  
 Dr. Leo N. Kirch, Norton  
 Dr. Eugene L. Lowenberg, Norfolk  
 Dr. Walter B. Martin, Norfolk  
 Dr. William B. McIlwaine, Petersburg  
 Dr. Samuel E. Miller, Abingdon  
 Dr. M. T. Moorehead, Duarte, Calif.  
 Dr. H. B. Mulholland, Charlottesville  
 Dr. Eugenia E. Murphy, Arlington  
 Dr. B. W. Nash, Timberville  
 Dr. Maysville Jane Page, Richmond  
 Dr. Sidney G. Page, Jr., Richmond  
 Dr. Rea Parker, Jr., Smithfield  
 Dr. Edward W. Perkins, Richmond  
 Dr. W. A. Porter, Hillsville  
 Dr. Dennis H. Robinson, Bedford  
 Dr. Milton Salasky, Norfolk  
 Dr. J. H. Scherer, Richmond  
 Dr. Frank P. Smart, Norfolk  
 Dr. Catherine W. R. Smith, Abingdon  
 Dr. Thomas E. Smith, Hayes Store  
 Dr. E. C. Toone, Jr., Richmond  
 Dr. James T. Tucker, Richmond  
 Dr. Meyer Vitsky, Richmond  
 Dr. W. M. Wattles, Lynchburg  
 Dr. Carrington Williams, Sr., Richmond  
 Dr. Hyman S. Zfass, Richmond

#### Dr. Payne Heads Medical Examiners.

Dr. Waverly R. Payne, Newport News, was elected president of the Virginia State Board of Medical Examiners at its meeting in Richmond on June 16th. Dr. W. Holmes Chapman, Jr., Suffolk, was named vice-president, Dr. K. D. Graves, Roanoke, re-elected secretary-treasurer.

#### Dr. John Williams

Has located in Powhatan where he has opened his office for general practice.

#### The Children's Home Society of Virginia

Will change the address of its Arlington office on approximately August 2nd. It will move *from* 1411 North Garfield Street *to* 3150 Wilson Boulevard, Arlington. Mailing address and telephone remain the same, namely P. O. Box 366 and Jackson 7-6820.

The change is called to your attention so that, if you refer a mother who wants to place her baby for adoption she will not be confused by going first to the wrong place.

The Society's other two offices continue to be at 322 South 3rd Street, Richmond, and 323- 8th Street, S. W., Roanoke.

#### Dr. Maynard Emlaw,

Richmond, has been named system medical director of the Virginia Electric and Power Company, following the death of Dr. Stuart MacLean, chief medical officer. For the past four years, he has been assistant to Dr. MacLean.

#### Virginia Society of Ophthalmology and Otolaryngology.

The following officers were elected at the spring meeting on May 7th: President, Dr. G. Slaughter Fitz-Hugh, Charlottesville; president-elect, Dr. Howard L. Mitchell, Lexington; vice-president, Dr. Marion K. Humphries, Charlottesville; and secretary-treasurer, Dr. L. Benjamin Sheppard, Richmond.

#### Dr. Fletcher D. Woodward,

Charlottesville, has been appointed by the president, Dr. Vincent W. Archer, to represent The Medical Society of Virginia on the Advisory Committee of the Governor's Highway Safety Committee.

#### South Atlantic Association of Obstetricians and Gynecologists.

At the regular meeting in January, the following officers were elected: President, Dr. Robert G. Nelson, Tampa, Fla.; president-elect, Dr. Waverly R. Payne, Newport News; vice-president, Dr. John C. Burwell, Greensboro, N. C.; and secretary, Dr. C. H. Mauzy, Winston-Salem, N. C.

#### Dr. Paul B. Toms,

Martinsville, has been elected president of the Patrick-Henry Tuberculosis Association.

#### Dr. B. K. Weems,

Waynesboro, has been named as a member of the Board of Directors of the Staunton-Augusta-Waynesboro Muscular Dystrophy Association of America.

#### The American Dermatological Association

Is again offering a series of prizes for the best essays submitted for original work, not previously published, relative to some fundamental aspect of dermatology or syphilology. Cash prizes of five hundred, three hundred and two hundred dollars will be awarded. Manuscripts typed in English with double spacing and ample margins as for publication, together with illustrations, charts and tables, all of which must be in triplicate, are to be submitted not later than November 15, 1954. They should be sent to Dr. J. Lamar Callway, Secretary, Duke Hospital, Durham, N. C.

**New Doctors in Halifax.**

Three new doctors have been added to staff of the Halifax Community Hospital. They are Dr. William A. Fuller, Dr. Lucien W. Roberts, Jr., and Dr. William G. Wysor, Jr.

Dr. Warren Hagood is now associated with Drs. J. D. and William Hagood in Clover; Dr. George Lee Wilkinson is associated with Dr. Lloyd Eastlack in South Boston; Dr. George E. Chappell will have offices in Halifax; and Dr. Joseph E. Mathias is associated with Dr. William C. Brann of South Boston.

**Dr. John R. Freeman,**

Cape Charles, has been appointed as medical examiner for all inactive Naval Reservists in the Cape Charles areas.

**The Third International Congress on Diseases of the Chest,**

Sponsored by the Council on International Affairs of the American College of Chest Physicians and presented under the patronage of the Spanish Government, will be held at Barcelona, Spain, October 4-8, 1954. Leading specialists in cardiac and pulmonary diseases throughout the world will participate in scientific discussions dealing with recent advances made in the diagnosis and treatment of heart and lung diseases.

**New Maternal and Child Health Clinic at Norton.**

The first session of this new clinic was held on June 10th at the Wise County Health Center and will meet on the second and fourth Thursdays of each month.

**Dr. William B. Porter,**

Richmond, has been made a member of the Advisory Medical Board in America of the American Hospital, Paris, France.

**Roanoke Doctors in Civil Air Patrol.**

Dr. John L. Harris, Jr., is the medical officer of the Civil Air Patrol Cadet Squadron in Roanoke, and Dr. Frank L. Angell is the assistant medical officer and training officer.

**Mead Johnson Scholarship Awards.**

Dr. Arch T. McCoy, II, an intern at the Medical College of Virginia, Richmond, and Dr. Robert E. Sotta, an intern at the U. S. Public Health Hospital in Norfolk, have received two of the Mead Johnson

General Practice Scholarship Awards. These awards consist of \$1,000 each to be used to help defray the expenses of a year's training in a general practice residency. The scholarship program was established in 1952 by the American Academy of General Practice. There are ten awards given annually.

**Dr. G. Watson James, III,**

Richmond, has been elected a member of the American Society of Clinical Investigation and a member of the Council of the American Federation for Clinical Research.

**Dr. John L. Patterson, Jr.,**

Richmond, has been elected President of the Southern Section of the American Federation for Clinical Research. He has also been made a member of the American Society for Clinical Investigation.

**Parke, Davis & Company Announces New Facilities.**

Plans have been announced for new facilities at the 700-acre Parkedale Farm in Rochester, Michigan. This will be used to increase the firm's output of Polio Vaccine for use next summer. The vaccine will be produced in two buildings, one of which will be entirely new. It will be constructed of masonry and steel and the interior will be glazed tile. The other structure will be remodeled to accommodate several thousand monkeys which play an important part in the production of the vaccine.

**Officers of Richmond Area Heart Association.**

Dr. Reno R. Porter has been elected president of this Association and Dr. Paul D. Camp first vice-president. Drs. Elmer S. Robertson, John Patterson, Robert Trice and Herbert Langford are members of the board of directors.

**Dr. Guy C. Richardson,**

Bristol, represented the Veterans of Foreign Wars at the annual meeting of the national organization held at White Sulphur Springs, June 18-19. He is national surgeon general of the VFW.

**News from State Health Department**

Roanoke County will be added to Bedford County forming the Bedford-Roanoke Health District under the direction of Dr. W. P. Jackson. Offices for Roanoke County will be in Salem, Virginia; however, all personnel will not be available until September 1, 1954, and the department will not be in full operation until that time.



Dickenson County will be added to Russell-Wise forming the Dickenson-Russell-Wise Health District under the direction of Dr. R. W. Jessee. Offices for Dickenson County will be in Clintwood, Virginia.

Campbell County, which has been joined with Bedford County, will now become a part of the existing Charlotte-Nottoway-Lunenburg Health District under the direction of Dr. W. W. Hargrave.

\*Dinwiddie County will be separated from Sussex-Surry-Prince George and added to Brunswick-Greenville-Mecklenburg under the direction of Dr. Francis J. Clements. It is anticipated that Lawrenceville will remain as headquarters for the district.

\*Sussex-Surry-Prince George will be added to Amelia-Chesterfield-Powhatan under the direction of Dr. E. C. Gates. Chesterfield will be headquarters for the district.

The local health department in Green County will be discontinued.

The Richlands office in Tazewell County will be closed. Tazewell is and will continue to be headquarters of the district.

#### **Drs. Woodward and Moon.**

Dr. Fletcher D. Woodward and Dr. Cary N. Moon, Jr., announce their association for the practice of otolaryngology, broncho-esophagology, and maxillo-facial surgery, with offices at the Physicians and Surgeons Building, Charlottesville.

#### **Dr. Armistead Page Booker**

Announces the association of Dr. James Burnley Wood, with offices at 1021 West Main Street, Charlottesville. They will limit their practice to infants and children.

#### **Polio Vaccine Trial Needs Physicians' Aid.**

More than 600,000 children have completed three inoculations, in the field test of the trial polio vaccine developed by Dr. Jonas E. Salk of the University of Pittsburgh. The emphasis now shifts to the evaluation study under the direction of Dr. Thomas Francis, Jr., University of Michigan School of Public Health. The validity of the evaluation is dependent upon data gathered on poliomyelitis cases in the test groups, *including those children in the first three grades who did not get vaccine.*

In addition, data on cases among family members of participating children are an integral part of the study. Since the number of poliomyelitis cases

among the test groups may not be large, it is essential that all cases are completely reported. Early diagnosis, prompt reporting and follow-up, and the securing of *necessary epidemiological information and laboratory specimens* are important factors in the evaluation.

An outline of procedures and copies of necessary forms have been sent to local and state health authorities. It is important that physicians in areas where vaccinations were not given, cooperate in the study by notifying local or state health officers of cases occurring among children who participated in the trials and then migrated to another area and children who go to summer camps. Local health officials also need information on participating children who receive injections of Gamma Globulin.

This phase of the study will depend, to a large degree, on the whole-hearted cooperation of practicing physicians.

#### **Diplomates of the American Board of Obstetrics and Gynecology.**

The following Virginia doctors received certification in obstetrics and gynecology by the American Board meeting in Chicago on May 17th: Dr. John R. Bottomy, Fort Lee; Dr. William S. Grizzard, Petersburg; Dr. Theron H. Haas, Radford; Dr. George R. Jones, Richmond; Dr. William W. Manson, Portsmouth; Dr. John J. Marsella, Danville; Dr. Edwin B. Parkinson, Richmond; Dr. Stanley E. Smith, Jr., Norfolk; Dr. Helen W. Taylor, Norfolk; and Dr. Arthur L. Wilson, Winchester.

#### **Urology Award.**

The American Urology Association offers an annual award of \$1000 (first prize of \$500, second \$300 and third \$200) for essays on the result of some clinical or laboratory research in Urology. Competition shall be limited to urologists who have been graduated not more than ten years and to men in training to become urologists.

For full particulars write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before January 1, 1955.

#### **Neuropsychiatric Society of Virginia.**

New officers of this Society, elected at the Spring meeting, are: President, Dr. Granville L. Jones, Williamsburg; vice-president, Dr. R. W. Garnett, Jr., Charlottesville; and secretary-treasurer, Dr. George S. Fultz, Jr., Richmond.

\*Temporary arrangement until further notice.

**Caleb Fiske Prize Essay.**

The Trustees of what is considered America's oldest medical essay competition, the Caleb Fiske Prize of the Rhode Island Medical Society, announce as the subject for this year's dissertation "Modern Developments in Anesthesia". The essay must be typewritten, double space and should not exceed 10,000 words. A cash prize of \$250.00 is offered.

For complete information, write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, R. I.

**Only Deodorants Control Perspiration.**

Soap and water do not prevent perspiration odor—only deodorant creams or liquids will do the trick—according to Mrs. Veronica L. Conley, Chicago, assistant secretary of the American Medical Association's Committee on Cosmetics.

Soap and water will remove some bacteria from the armpits, inhibiting perspiration and leaving the area odor-free for a while, Mrs. Conley wrote in *Today's Health* magazine. But, as it is impossible to remove all the bacteria from the skin by this method, the remaining bacteria resume growth in a short time and the cycle in the production of perspiration odor begins again.

"Prolonged deodorant action comes from leaving behind on the skin a substance that continually inactivates remaining bacteria. Effective deodorant creams and liquids do this; ordinary soap and water do not."

Some people still cling to the old idea that washing daily with soap and water is adequate protection against perspiration odor. "They feel that perspiration odor is no more or less than a sign of uncleanness. There is evidence, that a few people need no more protection than that afforded by washing the armpits twice a day with ordinary soap and

water, particularly if the areas have been shaved. But for most people, ordinary washing is not sufficient.

"There is some variation in intensity and character of perspiration odor in different people. In children, no perspiration odor is present because the apocrine glands are not functioning. In older people, the gland activity is reduced, and there is usually considerably less perspiration odor. A few people, even during the period of greatest glandular activity, have noticeably less perspiration odor than their fellows and require less protection."

Mrs. Conley pointed out that as soap would be a logical product to use as a deodorant, researchers have been and are trying to find a chemical to add to soap which would make it an effective deodorant. Thus far, no such chemical has been proved to be completely satisfactory.

**Desires Association.**

General practitioner, now qualified Psychiatrist, licensee Virginia, presently practicing in Indiana, desirous of establishing association with group or individual, in Virginia, with view to developing Psychiatric Treatment Center, on an Out-Patients basis, to include Psycho, Electro, and Occupational Therapy. Also interested in Industrial Psychiatry. Must have basic salary, plus. Reply in first instance to "Psychiatrist", care Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

**For Sale.**

Hamilton examining table, Sanborn electrocardiograph, Lumetron Colorimeter, x-ray accessories, miscellaneous G. P. office equipment and instruments. Easy payment can be arranged. In Roanoke, Virginia. Write #100, care Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

---

## OBITUARIES

### Dr. George Harrison Musgrave,

Prominent physician, of Leesburg, died April 20th. He was sixty-nine years of age and received his medical degree from the University of Virginia in 1908. Dr. Musgrave began his practice at Virginia Beach and then located in Southampton County. Following service in World War I, he was in public health work in Richmond for three years, after which he located at Leesburg. Dr. Musgrave had been a member of The Medical Society of Virginia since 1908.

The following resolutions were adopted by the Loudoun County Medical Society:

WHEREAS: Almighty God, in His wisdom, has removed from our midst Dr. George Harrison Musgrave, our friend and brother practitioner;

WHEREAS: Dr. Musgrave has been a physician of exceptional ability in Loudoun County for twenty-seven years;

WHEREAS: Dr. Musgrave endeared himself peculiarly to his patients and his friends by his sterling virtues;

WHEREAS: Among Dr. Musgrave's many virtues these shone out luminously: his unusual sweetness of nature, his charming simplicity, his honest directness, his unwavering gentleness, his extraordinary devotion to duty, his untiring patience, his unalterable loyalty, his constant courage and his high sense of honor;

WHEREAS: In the passing of Dr. Musgrave his friends will suffer a great loss;

THEREFORE, BE IT RESOLVED: That a copy of these resolutions be sent his bereaved family, for whom all the members of this Society wish to express their deep sympathy, a copy be sent to each of the county newspapers, and a copy be sent to the Secretary of the Loudoun County Medical Society for its files.

W. O. BAILEY

*For the Loudoun County  
Medical Society*

### Resolutions on Miss Edwards.

WHEREAS Miss Agnes V. Edwards was for many years a respected and devoted managing editor of the VIRGINIA MEDICAL MONTHLY, the Advisory Committee of the State Journal Advertising Bureau, in regular active session, voted this day to pass a resolution conveying our sympathy to the Medical Society of Virginia and the Staff of the Journal.

The Conference of Editors and Business Managers of the State Medical Journals has lost a distinguished participant.

BE IT THEREFORE RESOLVED that in the death of Miss Edwards the State Medical Journals have lost a loyal friend and representative.

BE IT FURTHER RESOLVED that a copy of this resolution be sent to the VIRGINIA MEDICAL MONTHLY.

STANLEY B. WELD, M.D., *Chairman*

L. FERNALD FOSTER, M.D.

DOUGLAS W. MACOMBER, M.D.

C. GRENE COLE, M.D.

BRUCE UNDERWOOD, M.D.

ALFRED J. JACKSON, *Secretary  
and Director*

June 20, 1954

WHEREAS, It has pleased God to call to her reward, our honorary member, Miss Agnes V. Edwards, and,

WHEREAS, She has from its organization been of untold assistance at all times, in many ways, to the Woman's Auxiliary to The Medical Society of Virginia; ever ready to give personal advice when consulted, and ever ready to give space in the Virginia Medical Monthly to further the work of this organization,

BE IT THEREFORE RESOLVED: That, while mourning the loss it sustains in the death of Miss Edwards, the Woman's Auxiliary to The Medical Society of Virginia will ever hold in reverence the beauty of her friendship, and the example of her faithful service;

That an expression of very deep and abiding sympathy be extended her brother, Dr. Charles M. Edwards;

That a copy of these resolutions be published on the Woman's Auxiliary page of the Virginia Medical Monthly, and a copy be kept in the Secretary's Book of Minutes of the Woman's Auxiliary to The Medical Society of Virginia.

ANNE SEAY WRIGHT (Mrs. Fletcher J.)

LOUISE JOHNSON HAMNER (Mrs. John E.)

### Dr. Gwathmey.

On March 22, 1954, Dr. Lomax Gwathmey, a member and past president of this society and the dean of Norfolk's surgeons, died at his residence at Bay Colony, Virginia Beach. His period of medical practice had covered more than fifty years when he retired in September, 1948.

He was born November 5, 1869 in Norfolk, the son of William Watts and Mary Tayloe Gwathmey. His early education was obtained in the Begnell and Gatewood preparatory schools, after which he entered the University of Virginia, where he graduated in Medicine in 1889. He then attended the College of Physicians and Surgeons of Columbia University, receiving his M.D. degree from that institution in 1890. After serving as intern in Bellevue and Mt. Sinai hospitals in New York, he, like many others, went abroad and studied under the great teachers of that period, at Vienna and Heidelberg. Returning to Norfolk in 1895 he began the practice of medicine and surgery. In a few years he and Dr. Kirkland Ruffin founded St. Christopher's Hospital which enjoyed a long and distinguished period of service.

In World War I, Dr. Gwathmey volunteered for service early in 1917. He was assigned to duty in July, 1917 and



served at the Rockefeller Institute, Camp Green and Camp Sevier. He helped to organize Base Hospital, #41, University of Virginia and went with this organization to France. He was detached and sent to an operating unit of Evacuation Hospital #4. While serving with this unit he was wounded by a shell, November 6, 1918 and invalided home December 25th of the same year. He was honored with a personal citation and discharged in January, 1919, with the rank of major, United States Army. Immediately, he resumed the practice of surgery and continued in this field until his retirement.

This, in brief, is a biographical sketch of Dr. Gwathmey, but it tells little of the man as we knew him. He received splendid training in medicine and surgery but what he did with this training is far more significant. His education gave him the disciplined mind, the grasp of realities, the power of creative thought, the ability to ask the right questions, the never flagging curiosity, the quest for ultimates, which, however unattainable, the truly wise man ever craves.

In the last analysis, of course, Dr. Gwathmey will be judged on the basis of his specialized activity and to it he brought a rare ability, a diagnostic acumen, a surgical skill that won him national recognition; and what those who were close to him knew so well; a devotion to duty.

His place as a great surgeon is secure but he was more than a great surgeon. He refused to be pigeonholed in a specialty, however important the specialty might be. Emerson says somewhere, "Let not a man's work eat up a man so that he become all porch and no house." Dr. Gwathmey built a substantial mansion of living behind the porch of his work. Engaged in an exhausting labor, rendering distinguished service in its behalf, he refused to allow it to become an exclusive engrossment. He was alive to all the rich stimuli in the world about him. In his love of nature he "held communion with her visible

forms and she spoke a various language." He listened to the song of birds, and earth and sea and sky intrigued him with their beauty. He was loyal to the royal values of life, not as a pose but in deep allegiance to those qualities of mind and heart that raise man above the level of animalism. He was without guile or evasiveness. He was no fence straddler or time server. He hated insincerity.

There were no walls in his soul, on the inside for fellowship, on the outside for ostracism. To him the differences between men were merely marks of identification, never excuses for exclusion. He played no favorites, but reached out with compassionate eyes and in healing effort toward his fellow-men.

It is this estimate, beyond his surgical skill, that will keep him alive in the memory of his many friends.

THEREFORE BE IT RESOLVED, that these resolutions be spread upon the pages of the minutes of the Norfolk County Medical Society and copies be sent to Mrs. Gwathmey and the Virginia Medical Monthly.

N. G. WILSON

WALTER B. MARTIN

A. BROWNLEY HODGES, *Chairman*

### Dr. Jackson.

The Northampton County Medical Society realizes it has lost a most valued member in the passing of Dr. J. Walker Jackson. He was a physician who held himself ever ready to minister to the sick in any walk or station in life. Never did he consider himself first. Never was the distance too great, the hour too late or the fee too small for him to give service to those who needed it.

THEREFORE, BE IT RESOLVED that the County Society greatly regrets his passing.

J. R. HAMILTON, M.D., *President*

accuracy every time

# Clínítest<sup>®</sup>

BRAND

for detection of urine-sugar

"Both *Clínítest* and Benedict's qualitative test are completely accurate when properly performed."<sup>1</sup>

but

"...there are fewer sources of error with *Clínítest*."<sup>1</sup>



and

"The routine Benedict test...is seldom well performed because of the difficulties of accurate measurement of reagent and urine and because of the practical difficulties of uniform heating; the much simpler and more readily standardized tablet test is to be preferred..."<sup>2</sup>



1. Cook, M. H.; Free, A. H., and Giordano, A. S.: Am. J. M. Technol. 19:283, 1953.

2. Gray, C. H., and Millar, H. R.: Brit. M. J. 4824:1361 (June 20) 1953.

*Ames Diagnostics—Adjuncts in clinical management*



## AMES

COMPANY, INC • ELKHART, INDIANA

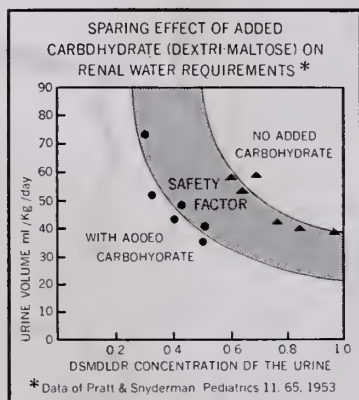
Ames Company of Canada, Ltd., Toronto

59254

# DEXTRI-MALTOSE

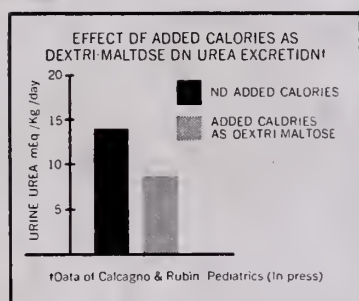
*formulas*

**provide important  
physiologic safeguards**



**Added renal safety.** When the effective carbohydrate, Dextri-Maltose®, is added to cow's milk formulas, the infant's water requirements are reduced. This provides an added margin of safety against dehydration. In addition, the load on the water excretory capacity of the infant's immature kidneys is reduced.<sup>1,2</sup>

The margin of renal safety is especially important since various stresses and handicaps have been shown to influence the infant's fluid balance and renal capacity.<sup>1,3,4,5</sup>



**Better nitrogen retention.** The addition of adequate carbohydrate (Dextri-Maltose) to cow's milk formulas increases the infant's nitrogen retention and promotes the efficient use of nitrogen for growth,<sup>2</sup> causing a reduction in the excretion of urea and lightening the load on the infant's kidneys.

Ample carbohydrate is provided in a milk and water mixture by inclusion of 4 to 5% of Dextri-Maltose—or 1 tablespoonful to each 5 or 6 fluid ounces of formula.

With a record of forty-three years of outstanding clinical success, no other carbohydrate has earned such world-wide acceptance and confidence in its constant dependability as Dextri-Maltose.



1. Pratt & Snyderman: Pediatrics 11: 65, 1953; 2. Calcagno & Rubin: Pediatrics (in press); 3. Calcagno, Rubin & Weintraub: J. Clin. Investigation 33: 91, 1954; 4. Coake, Pratt & Darrow: Yale J. Biol. & Med. 22: 227, 1950; 5. Gamble: J. Pediat. 30: 488, 1947; 6. Rappaport: Am. J. Dis. Child. 74: 682, 1947.

## DEXTRI-MALTOSE

the carbohydrate of choice for infant formulas



# VIRGINIA MEDICAL MONTHLY

## *Contents*

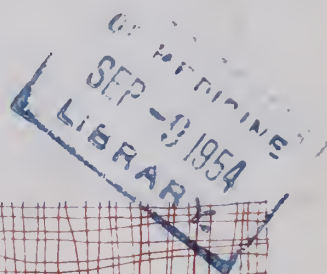
Intraspinal Tumors and the Part They Play in General Diagnosis,  
Winchell McK. Craig . . . 409

Mixed Cell Tumors of the Parotid Gland, G. S. Fitz-Hugh . . . 413

Surgery of the Biliary Tract, Frank S. Johns . . . 419

Unnecessary Pain, Milton Ende . . . 423

(Continued on page 6)



FOR COMMON BACTERIAL INFECTIONS IN CHILDREN

**ILOTYCIN**  
(ERYTHROMYCIN, LILLY), ETHYL CARBONATE

**PEDIATRIC**

PALATE-PLEASING • EFFECTIVE

ILOTYCIN • THE ORIGINAL ERYTHROMYCIN



when resistance  
to other  
antibiotics develops...

---



PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

# Virginia Medical Monthly

Vol. 81, No. 9  
WHOLE No. 1227

RICHMOND, VA., SEPTEMBER, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## INTRASPINAL TUMORS AND THE PART THEY PLAY IN GENERAL DIAGNOSIS\*

WINCHELL MCK. CRAIG, M.D.,  
Section of Neurologic Surgery,  
Mayo Clinic and Mayo Foundation,†  
Rochester, Minnesota

It is probable that no tumor can create such a variety of pain and disability as can an intraspinal one. Yet the majority of intraspinal tumors are benign and produce disability by direct pressure on the intraspinal nerves and on the tracts of the spinal cord. However, since the pressure may interfere with the circulation and nutrition of the spinal cord, irreparable injury may be caused, not by invasion of the cord but by ischemic and degenerative processes. Hence, early diagnosis and removal of the lesion are most important.

The difficulty in diagnosis of intraspinal tumors stems from the slow, insidious onset and the often intermittent occurrence of the symptoms. These factors, of course, are confusing, because the symptoms often simulate those of certain degenerative diseases of the spinal cord, and may be misleading. The degenerative conditions which may simulate intraspinal tumors include syringomyelia and demyelinating diseases such as multiple sclerosis, subacute combined sclerosis and arteriosclerosis of the spinal cord. Not all these syndromes are diseases in themselves, but they should bring to mind, as does combined sclerosis, the need for the neurosurgeon to consider several causes of the syndrome. Other conditions which need no further consideration are the diseases of the motor neurons such as amyotrophic lateral sclerosis and infectious diseases such as anterior poliomyelitis, and some of the rarer diseases.

### SYRINGOMYELIA

One of the confusing clinical syndromes is that produced by syringomyelia or cystic degeneration of the center of the spinal cord. The classical syndrome of syringomyelia is well known, but the pa-

tient rarely says that he is unable to distinguish between hot and cold applications to his hands, shoulders or body. More often, he complains of numbness and weakness of a hand, and it is found, when all sensory tests have been performed, that he has what neurologists call a "dissociated anesthesia." This is demonstrated by loss of feeling for painful and thermal stimuli but not for touch. Syringomyelia, as it progresses, causes a variety of other symptoms and signs, almost any one of which may indicate the need of a complete neurologic examination. Scoliosis with paralysis of spinal muscles, atrophy and weakness of muscles in the hand and arm, may cause the patient to consult a physician. Disturbances of gait, dysphagia and dysphonia often call for a consideration of syringomyelia in the differential diagnosis. Impaired function of cranial nerves and nystagmus will be noted in those patients who have an associated syringobulbia.

### MULTIPLE SCLEROSIS

With the recent focus of attention upon multiple sclerosis as a disabling disease of unknown origin, physicians are alert to the presence of this condition and frequently make such a diagnosis without considering other conditions. This is a demyelinating disease the main clinical features of which occasionally are confused with those of syringomyelia if the symptoms are confined to the spinal cord. Early in the course of the disease, the patient's difficulties in walking may be much the same as they are in other diseases which produce similar localized lesions. The tendon reflexes are hyperactive, whereas in cases of syringomyelia they are markedly depressed, particularly in the upper extremities. Recurrent remissions and exacerbations are an outstanding feature in cases of multiple sclerosis. The well-known triad of nystagmus, incoordination and

\*Read at the meeting of Roanoke Academy of Medicine at the Spring Congress in Ophthalmology and Otolaryngology of the Gill Memorial Eye, Ear, Nose and Throat Hospital, Roanoke, Virginia, April 5 to 10, 1954.

†The Mayo Foundation is a part of the Graduate School of the University of Minnesota.



scanning speech occurs late in the course of the disease.

#### ARTERIOSCLEROSIS OF THE NERVOUS SYSTEM

The term, "arteriosclerosis of the central nervous system," often is used to explain neurologic symptoms in aged persons. Fatigue of the legs which accompanies exercise has been explained as being due to intermittent claudication of the spinal cord and perhaps of the peripheral nerves. This may or may not be associated with an unsteady gait. Paresthasias and the sensation of objects crawling over the limbs or body may be among the chief symptoms. Tendon reflexes in the lower limbs often are unequally reduced, and Babinski's reflex may be elicited on one side or both sides.

#### SUBACUTE COMBINED SCLEROSIS

Patients who have subacute combined sclerosis complain of numbness and tingling of the toes. If the syndrome is due to pernicious anemia, the patients usually will complain of similar manifestations in their fingers. Reduction in vibration sense often is present at a level as high as the iliac crests. None of our patients with intraspinal tumors had symmetric numbness and tingling of all four extremities. The other signs mentioned thus far are not uncommon features of a lesion which compresses the spinal cord; however, the Achilles tendon reflex usually is present and Babinski's reflex usually is absent in cases of lesions compressing the spinal cord.

#### CONDITIONS WHICH COMPRESS THE SPINAL CORD

Compression of the spinal cord caused by such lesions as a protruded intervertebral disk, arachnoiditis and neoplasm may simulate in some degree the following syndromes: peripheral neuritis or polyradiculitis, multiple sclerosis, spinomeningovascular syphilis, subacute combined sclerosis, arteriosclerosis of the nerves and spinal cord, diabetic neuropathy or myelopathy, syringomyelia, and the Brown-Séquard syndrome.

Pain is the most outstanding symptom of an intraspinal tumor. The pain of intraspinal tumors may occur in certain regions in which there is a coincidental pathologic process such as disease of the gallbladder, an ovarian tumor, a fibroma of the uterus, appendicitis, a thoracic tumor, or a bony lesion of the extremities, and removal of the associated lesion will not relieve the pain.

In distinguishing the pain caused by intraspinal lesions from that caused by organic lesions of the thorax, abdomen and extremities, many diagnostic procedures are available. None of these can begin to compare with a careful and thorough neurologic examination. For such an examination, it is necessary to have the patient disrobe completely. The physician must consider any change from normal in the many reflexes, in the response to cutaneous stimulation by touch, heat and cold, and in the strength of the muscles. Roentgenologic examination of the spinal column frequently is of great value in demonstration of the presence or absence of changes in the bony structure caused by inflammation, previous trauma, erosion and tumors. Examination of a specimen of cerebrospinal fluid obtained by lumbar puncture is one of the most valuable diagnostic procedures. The physical, chemical and cytologic characteristics of the cerebrospinal fluid may furnish the evidence necessary for the diagnosis of an intraspinal lesion. Additional examination for changes in pressure, after an increase in intracranial pressure resulting from compression of both jugular veins, will determine whether or not subarachnoid block is present. This prevents free circulation of the fluid in the subarachnoid space.

If pain is present and examination of the cerebrospinal fluid discloses an abnormality, it is often very difficult to localize the lesion of the spinal cord accurately. For further localization of the lesion, iodized oil can be used. When this opaque substance is injected into the subarachnoid space, it collects at the level of the block, and this level can be determined by roentgenographic examination. It often is important to make a very careful neurologic examination after the removal of cerebrospinal fluid, inasmuch as levels at which sensory disturbances appear may become apparent, reflex changes may take place, and muscular weakness may occur. With all these diagnostic procedures at the physician's command, it still may be impossible to demonstrate any signs of a neurologic lesion. In such an instance, examination should be repeated at frequent intervals before any drastic therapeutic measures are used for the relief of pain in cases in which the presence of an intraspinal lesion is suspected.

The pain of an intraspinal lesion may precede any other symptom by months or years. It may be constant or intermittent. Its chief characteristic is that

it occurs when the patient is at rest, and it is relieved by exercise. The character of the pain is almost pathognomonic since it persists in a localized area and extends over the same nerve roots. It is usually lancinating, and is aggravated by coughing, sneezing, lifting and straining at stool. It invariably awakens the patient 4 to 6 hours after he has retired. It often becomes so severe as to compel the patient to walk the floor or to sleep in a sitting position. Unfortunately, many patients are treated for neuritis, muscular rheumatism or syphilis, and some have been even called "hysterical." The importance of the recognition of the first painful stage of tumors of the spinal cord was emphasized in a recent survey in which 10 per cent of the patients who had root pain had been operated upon for some thoracic or abdominal lesion.

#### DIFFERENTIAL DIAGNOSIS

Degenerative or demyelinating diseases of the spinal cord must be considered in the differential diagnosis of intraspinal lesions. Since an intraspinal tumor may be a metastatic lesion, a general examination is important. Of all malignant tumors, carcinomas of the breast and prostate gland are most likely to metastasize to the spinal cord. It must not be forgotten that metastatic involvement of the spinal cord may not become evident until many years after the primary tumor has been removed. Since carcinoma of the prostate gland may not produce local symptoms, rectal examination should be made.

#### SURGICAL TREATMENT

The treatment for intraspinal lesions is, of course, surgical, and of primary importance is the anesthesia under which the operation is done. The selection of proper anesthesia to use during operations on the spinal cord depends on the patient and on the facilities for administration. Most patients who have had a great deal of pain from the intraspinal lesion prefer general anesthesia. However, paravertebral regional anesthesia produced with procaine hydrochloride and epinephrine minimizes the amount of bleeding, but cannot be used for hypersensitive patients. Since the introduction of pentothal sodium anesthesia produced by intravenous injection, we have been using it almost exclusively in this type of case with excellent results. The intravenous administration of pentothal sodium is made safer by the use of the Magill intratracheal tube through which

oxygen and nitrous oxide can be administered as an adjunct throughout the operation.

Once the diagnosis of a tumor of the cord is established, the treatment is essentially surgical, because the objective is relief of compression of the spinal cord. The surgical mortality rate associated with removal of tumors of the spinal cord is less than 4 per cent. Exposure of the spinal cord at operation is accompanied by so little risk that it can be carried out routinely in the presence of dysfunction of the spinal cord associated with a distinct sensory level and subarachnoid block, or when the site of the tumor has been established by means of iodized oil. Good exposure of the cord is an essential factor, and, of course, the size and extent of the tumor necessarily control the extent of the laminectomy.

Extradural tumors are those lying in the space between the vertebral walls and the meninges, and are apparent by the time the laminectomy has been completed. If there is no evidence of compression by an extradural lesion, the dura can be opened and the cord examined for an extramedullary intradural tumor. A silver probe or soft rubber catheter can be gently inserted intradurally to eliminate the possibility of an obstruction, either above or below. Fortunately, the majority of intraspinal tumors are benign and are situated outside the spinal cord.

Intramedullary tumors, or those situated within the spinal cord, may cause symptoms of compression. Surprisingly enough, decompression of the spinal cord, either with or without a midline incision, produces a good result, particularly in cases in which the tumor is cystic. Benign tumors have been completely removed and recovery has resulted from decompression by means of laminectomy. Certain pathologic conditions found at operation may simulate intraspinal tumors. Pachymeningitis brought about by tuberculosis, syphilis or other chronic inflammatory diseases may prove to be the cause of the compression. Chronic cystic arachnoiditis may be encountered when the dura is opened. Varicosity of the meningeal vessels may simulate a tumor. This condition may be found adjacent to a tumor, and the diagnosis of varicosity may not be possible until the presence of a tumor has been excluded.

Postoperative care has been greatly simplified since the introduction of early ambulation. Previously, patients undergoing laminectomy for the

removal of intraspinal tumors were kept flat in bed for 2 or 3 weeks. Ambulation within the first 3 to 5 days is not uncommon, depending on the previous disability and the ability of the patient to be up and about. Early ambulation has greatly reduced the incidence of vesical complications which necessitate the use of an indwelling catheter for the first few days after operation. Early ambulation also has reduced the need for passive motion and massage, since patients who are up and about can exercise the muscles which are undergoing recovery. The time required for the complete return of function of the paralyzed muscles is influenced by the duration and severity of the paralysis. As a rule, the time required for complete return of function is as follows: 3 months or less in cases in which the loss of function is 25 per cent, 6 to 12 months in which the loss is 50 per cent, and 18 months in which it is 75 per cent. In cases in which the loss amounts to 100 per cent, a complete return of function will occur within 2 years unless the spinal cord has been injured so severely that motor or sensory function will not return below the level of the lesion. The removal of intramedullary, infiltrating tumors often results in temporary improvement which may last for 6 or 7 years.

#### COMMENT

Because it recently has been discovered that obscure pain in the back and in the extremities frequently is due to protrusion of an intervertebral disk, an intraspinal tumor frequently has been overlooked.

Although most intraspinal tumors are benign, one should remember that metastatic tumors may occur at this site. The presence of a degenerative

lesion must be ruled out before one can make a diagnosis of an intraspinal tumor. Careful neurologic examination should be carried out in all cases in which the presence of an intraspinal tumor is suspected.

Roentgenographic examination of the vertebral column often will reveal erosion of bone or intraspinal calcification. The introduction of iodized oil into the spinal subarachnoid space has been of great value in the localization of intraspinal tumors before they have compressed the spinal cord.

Pain is the chief symptom in cases of intraspinal tumor. The pain has the following characteristics: (1) it occurs intermittently; (2) its severity is increased by coughing or sneezing; (3) it tends to occur after the patient has retired; (4) it usually causes the patient to arise early in the morning and sit in a chair, and (5) it generally is confined to certain dermatomes.

Intraspinal tumors may be extradural or intradural, and the intradural tumors may be intramedullary or extramedullary. It sometimes is difficult to distinguish an intramedullary tumor from an extramedullary tumor, although early involvement of the vesical and rectal sphincters usually is indicative of an intramedullary tumor. Fortunately, most intraspinal tumors are situated outside the spinal cord. Such tumors produce symptoms by exerting pressure on the spinal cord. Removal of the tumor will relieve the symptoms by removing the pressure on the cord.

Most intraspinal tumors are benign and can be removed. If a benign tumor is removed before it has caused permanent injury of the spinal cord, the operation usually will result in a complete return of the lost function.

---

#### "Athletic Heart" Theory.

The term "athletic heart" should be scrapped because it is used with too many different meanings to describe a condition that "probably does not exist," an editorial in the July 17th Journal of the American Medical Association said.

The many reports on the effect of exercise on the heart lead only to the conclusions that "infections are more important as a cause of cardiac disease

than exercise, that exercise even when strenuous will not damage a normal heart, and that persons with a heavy body build have a lower life expectancy than those with a lighter build regardless of the type or extent of their participation in sports."

However, there can be "no doubt" that strenuous exercise may injure a heart that is already weakened, and young athletes should have close medical supervision.



## MIXED CELL TUMORS OF THE PAROTID GLAND: Two Case Reports with Comments\*

G. S. FITZ-HUGH, M.D., F.A.C.S.†  
Charlottesville, Virginia

This is a presentation of the case reports of two patients with tumors of the parotid salivary glands having somewhat unusual and similar histories. Such reports should be of interest to this group (otolaryngologists), in view of the fact that many patients with diseases of the parotid, auricular, submandibular and cervical regions frequently consult you first, for help in the solution of their problems. In the comments following the presentation of the cases, I have unhesitatingly referred to the opinions of those having vastly more experience in dealing with the subject than I. Their contributions are listed in the references. An effort has been made to keep the histories brief, presenting only the more pertinent material.

Mrs. M. S., a white female, 42 years of age, was first seen by me on October 6, 1950. She was referred by her local otolaryngologist because of a mass below the right ear. The past history disclosed that a right, simple mastoidectomy had been performed some years previously. Subsequently, occasional purulent discharge had been noted in the ear canal. Several months prior to the initial consultation, antibiotic and x-ray therapy had been administered in an effort to eliminate the mass, without success. Not being satisfied, her otolaryngologist referred her to us for opinion and treatment.

Mrs. M. S. was admitted to the University of Virginia Hospital on November 6, 1950. Her complaint was the presence of an asymptomatic soft tissue mass, situated immediately below the right auricle, of eighteen months duration. A well-healed postauricular mastoidectomy scar was evident on the right side. A perforation of the right tympanic membrane was present, with a small amount of exudate noted in the middle ear. Below the auricle, slightly anterior, and overlying the mandible, there was a diffuse, smooth, rounded, firm mass, measuring 4 x 5 cm. in diameter. No inflammatory signs, such as tenderness and hyperemia, were present. The mass was essentially immobile. Normal salivary secre-

tions could be expressed from Stensen's duct. The remainder of the physical examination, including x-rays of the mastoid and adjacent areas, the naso-, oro- and laryngopharynx, disclosed nothing unusual.

On November 7, 1950, under general anesthesia, the area was explored. A skin incision, 10 cm. in length, was made below the angle and body of the mandible. The mass was found to be normal-appearing salivary gland tissue. Tissue removed for histologic examination was reported as: "Parotid Gland. No Pathological Change." The patient was discharged from the hospital on November 10, 1950, with a diagnosis of "Benign Hypertrophy of Parotid Gland."

After returning home, Mrs. M. S. was followed by her local referring physician. Later, however, she consulted another physician, who referred her to a medical institution in a neighboring state. In February, 1952, the mass, which had remained approximately the same in size, was explored by a general surgeon, using the same approach as I had, with essentially the same result. A diagnosis of adenoma of the parotid gland with no mixed cell tumor nor carcinoma was made.

Mrs. M. S. again consulted me on September 1, 1953. The complaints and findings were the same except that in my opinion there was some increase in the size of the mass. The patient and family were uncertain as to the accuracy of this observation. A sialogram of the parotid gland indicated imperfect filling of the deeper radicals. Since my initial failure in solving this problem, I had given it much thought, and after the last examination, was convinced that a deep new growth, displacing normal tissue externally, was present. A third exploration was in order; but in view of the past surgical history, I advised that she consult someone with more experience in this problem than I had. Consequently, upon my advice, she saw Dr. James Maxwell, of the Department of Otolaryngology, University of Michigan. On October 28, 1953, she was operated upon by this physician. Under general anesthesia, a Y-type of incision was made, extending from in front of and behind the auricle, downward and forward, below the angle of the jaw. A large encap-

†Department of Otolaryngology, School of Medicine, University of Virginia, Charlottesville, Va.

\*Presented at the meeting of the Virginia Society of Ophthalmology and Otolaryngology, Old Point Comfort, Virginia, May 8, 1954.

sulated mixed cell tumor, 5 x 4 x 4 cm., arising from the pharyngeal prolongation of the parotid gland, was located and removed. (Photograph 1). The facial nerve, which had undergone marked stretching, had been previously located and its branches identified and dissected free from the tumor. The integrity of this important structure was thus preserved. The postoperative recovery was rapid and uncomplicated by salivary fistula or facial muscle paresis. I examined the patient in January, 1954, and found her condition to be entirely satisfactory.

The second case to be reported is similar to the

His first admission to the University of Virginia Hospital was on October 25, 1948. A sialogram was obtained, which was reported as being normal. Because of a delay in the evacuation of the oil and an inflammatory reaction, the patient was discharged October 27, 1948, to return later for surgery. After readmission on November 7, 1948, the left parotid area was explored under general anesthesia. An incision was made along the lower angle of the jaw and the parotid gland was exposed. No tumor was revealed, only a diffuse enlargement, which was interpreted as being chronic parotitis. The patho-



Fig. 1.—Case No. 1. Tumor prior to removal. E, ear. P, reflected parotid gland tissue. N, markedly stretched facial nerves overlying surface of tumor. Case No. 2 at operation presented identical picture. (Photograph used through courtesy of Dr. James Maxwell.)

preceding one. Mr. J. K., a white male, 25 years of age, was first seen by a general surgeon at the University of Virginia Hospital on October 14, 1948. His chief complaint was an enlargement in the left parotid gland region, of five months duration. Examination disclosed a poorly delineated swelling, 3 x 4 cm. in diameter, immediately below and just anterior to the left auricle. A diagnosis of mixed tumor of the parotid gland or branchial cleft cyst was made. In the past history, it was interesting to note that the patient had been hospitalized previously in a smaller local hospital and treated for a parotitis.

logical report was the same. The patient was discharged from the hospital on November 10, 1948, after an uneventful recovery following the surgery.

After discharge, the patient was seen frequently. A consulting otolaryngologist concurred in the diagnosis of parotitis. X-ray therapy was instituted. Notes were made in time to the effect that the size of the gland decreased, but a noticeable mass persisted. The final x-ray treatment was given on December 1, 1950.

On November 6, 1953, the patient consulted me. There had been a very gradual increase in the size

of the mass in the left parotid gland region in the interval since 1950. It had remained asymptomatic otherwise. Examination revealed an obvious, diffuse, smooth, non-tender, non-inflammatory fullness in the region of the left parotid gland. (Photograph 2). No well-delineated nodule could be demon-



Fig. 2.—Case No. 2. Mass, left parotid region, prior to second operation.

strated. The scar of the previous operation was present below the body of the mandible. The pharynx was negative. Normal-appearing salivary secretions could be expressed from Stensen's duct. In view of the experience with the first case, I felt certain that this patient also had a neoplasm of the deep parotid lobe, displacing normal tissue outward.

Operation was advised; and after admission to the Otolaryngologic Service at the University of Virginia Hospital, the surgical procedure was performed. Under general anesthesia, a Y-type of incision was made anterior and posterior to the auricle and extending downward and forward to the angle of the mandible. In this manner, after the skin flaps were elevated,

maximum exposure of parotid tissue was obtained. The main stem of the facial nerve was identified in the region of the styloid process, after Maxwell's technique. Dissection of the nerve was carried out anteriorly, and in doing so, a large encapsulated tumor, arising from the deep lobe of the parotid gland, was encountered. (Photograph 3). The



Fig. 3.—Case No. 2. Mixed cell tumor, parotid gland, 5 x 4.5 x 4 cm.

facial nerve between the styloid foramen and its initial bifurcation had undergone marked lengthening by the pressure of the mass. The tumor was removed with as much margin of parotid tissue adjacent to the capsule as possible. After delivering the tumor from its bed, the wound was drained, closed and dressed in the usual manner. Recovery from the operation was rapid, without a salivary fistula, facial paresis, or auriculotemporal syndrome. The pathologist reported the tumor as being of the



Fig. 4.—Nerve stimulator used in parotid gland surgery.



mixed cell type. The patient was discharged from the hospital five days after operation. When last seen in March, 1954, his condition was satisfactory.

In these two cases, it is quite obvious that it is far too early to evaluate the permanent result. Mixed cell tumors may recur. The delay in removing these two tumors was due to failure to properly examine and explore the entire gland and to the isolation of the major branches of the facial nerve at the time of operation. This can be done only by an adequate skin incision and wide exposure of the entire gland, and will be further commented upon later.

#### COMMENT

The two cases had several factors in common, the most notable being the presence of a parotid mixed cell tumor and the delay in the establishment of the correct diagnosis, even though all concerned must have suspected it. Each patient was examined initially by two groups of consultant specialists, the otolaryngologists and the general surgeons, both failing to solve the problem of correct diagnosis, which, in retrospect, should have been evident from the first. Why did this occur? In my opinion, because of the reluctance of the consultants to fearlessly attack the parotid gland surgically. And this in turn is due to the complexity of the surgical anatomy of this particular structure. Had these masses appeared in the thyroid or submaxillary glands, no such delay would have occurred.

Successful surgery upon the parotid gland is predicated upon adequate exposure of the gland and familiarity with the branches of the facial nerve. Essentially, surgery of the parotid gland in the more difficult problems is surgery of the facial nerve. The initial incision utilized to obtain adequate exposure of the parotid gland is a Y-type one or a modification of it. This incision extends from the level of the tragus of the auricle, downward to just below the lobule of the ear. A second postauricular incision joins the anterior one, and, after the junction, is carried further downward below the angle of the mandible and then forward for several centimeters. The main stem of the facial nerve may be identified in the region of the base of the stylomastoid process, with the dissection progressing anteriorly or by identification of one of the peripheral branches of the nerve at its exit from the gland, and thence progressing posteriorly. Descriptions of the technique of the various methods may be found in articles by

Bailey<sup>1</sup>, Buxton, Maxwell and Cooper<sup>2</sup>, McCormick<sup>3</sup>, State<sup>4</sup>, Adson<sup>5</sup>, Byars<sup>6</sup>, Trueblood<sup>7</sup>, and Martin<sup>8</sup>. It has been demonstrated by McWhorter<sup>9</sup>, Hurford<sup>10</sup> and others that in some cases the parotid gland is a bilobed structure, consisting of a superficial (external) and a deep (pterygoid or internal) lobe connected by a well-defined isthmus, with the branches of the facial nerve located between the lobes. Hollinshead<sup>11</sup>, and particularly McKenzie<sup>12</sup>, from their observations, are doubtful that this concept of the parotid gland being a bilobed structure is correct. In our dissections in the anatomical laboratory, it has been difficult, possibly because of the condition of the cadaveric tissue, to readily identify separate lobes and isthmi; however, we have always noted parotid gland tissue internal and external to the pes anserinus of the facial nerve. Also, in the dissection at the time of surgery, the gland has been distorted by the presence of a tumor or an inflammatory process precluding the determination of an accurate picture of the normal structure. The terminal branches of the external carotid artery and the posterior facial vein pass through the substance of the deeper portion of the gland.

The most likely cause for a slowly developing asymptomatic mass in the region of the parotid gland is a mixed cell tumor. Foote and Frazell<sup>13</sup>, in a study of a large group of salivary gland tumors of all types, found that about 51 per cent were the so-called benign mixed tumors of the parotid gland. The tumors are rounded, ovoid, or possibly multilobular, and invested by a distinct but thin capsule. Extension of tumor cells may project microscopically through the capsule into adjacent parotid tissue, thus possibly explaining in part their tendencies to recur. In view of this observation, one-half to one centimeter of surrounding parotid tissue should be removed with the tumor, if possible, in order to obtain added assurance of complete removal, thus minimizing the chances for recurrence.

The preoperative diagnosis of mixed cell tumors is made on the basis of the history and clinical findings. Biopsy by the incision or aspirating method is not utilized except in unusual instances, because of the desire to remove the tumor intact and in order to lessen the opportunity for seeding of spilled cells. Also, as Clarke<sup>14</sup> observes, parotid aspirations are notoriously unreliable, and difficulty is sometimes encountered by the pathologist in making the correct diagnosis, even with the entire specimen. Frozen

section examinations may be requested in certain cases, to determine adequate margin or in the event of doubtful benignancy. Sialography adds little to the picture, and actually may cause a delay in performing surgery if unusual reaction to the presence of the iodized oil occurs in the gland tissue or if there is delay in the evacuation of the oil. X-rays of the gland for the presence of calculi, though very rare, are desirable. The final diagnosis depends upon the histologic study of the tissue.

The treatment of mixed cell tumor, as advised by Buxton *et al.*,<sup>15</sup> is total excision of the tumor while preserving the integrity of the facial nerve. Effort is made whenever possible to include in the excision a segment of the normal parotid tissue adjacent to the tumor capsule. A subtotal parotidectomy is performed, the total procedure being reserved for malignant neoplasm. Irradiation therapy is of no value in mixed salivary gland tumors.

Hamberger<sup>16</sup> discusses the postoperative complications one may encounter in subtotal parotidectomy. They are: temporary facial paralysis, salivary fistula, and the auriculotemporal syndrome (Frey gustatory syndrome). Facial paralysis, assuming that none of the major branches have been severed, is due to trauma to the nerve incidental to the dissection, and will clear within a matter of days to eight months. If the injured branch is the zygomatic one, a temporary tarsorrhaphy may be necessary to protect the cornea. Salivary fistulae will usually heal in a matter of days. Aspiration followed by pressure dressings or even x-ray irradiation, as advised by Clarke, may be necessary to encourage the cessation of the secretions. Reissner<sup>18</sup> mentions that interrupting the fibers connecting the auriculotemporal nerve, the facial nerve, and the parotid gland will help prevent a fistula. The auriculotemporal syndrome, characterized by perspiration, reddening and burning in the preauricular area, is rare, and when present, causes little concern.

#### SUMMARY

Two cases of mixed cell tumors of the parotid gland are reported, in which there was an extended delay prior to the establishment of the correct diagnosis. This, in these cases, was due to insufficient exposure of the gland at the time of the initial explorations. Emphasis is placed on the need for proper skin incisions and exposure of the gland, with identification of the main facial nerve branches,

in the solution of the more difficult surgical problems of the parotid gland. Comments are made on the technique and complications of parotid gland surgery.

#### ACKNOWLEDGMENT

I wish to thank Dr. James Maxwell for the privilege of using his notes and photographs in the report of Case 1.

Also, appreciation is extended to Dr. F. W. Poin Dexter and Dr. E. L. Alexander for referring Case I and for their aid in the follow-up of this patient.

#### REFERENCES

1. Bailey, H.: The Surgical Anatomy of the Parotid Gland, *British Medical Journal*, **2**:245-248, (July) 1948.
2. Buxton, R. W., Maxwell, J. H., and Cooper, D. R.: Tumors of the Parotid Gland, *The Laryngoscope*, **59**:565-594, (Aug.) 1949.
3. McCormack, L. J., Candwell, E. W., and Amson, B. J.: The Surgical Anatomy of the Facial Nerve, *Surg. Gyn. Obst.*, **80**:620-630, (May) 1945.
4. State, D.: Superficial Lobectomy and Total Parotidectomy with Preservation of the Facial Nerve in the Treatment of Parotid Tumors, *Surg. Gyn. Obst.*, **89**:237-241, (Aug.) 1949.
5. Adson, A. W., and Ott, W. O.: Preservation of the Facial Nerve in the Radical Treatment of Parotid Tumors, *Archives of Surgery*, **6**:739-746, (May) 1923.
6. Byars, L. T.: Preservation of the Facial Nerve in Operations for Benign Conditions of the Parotid Area, *Annals of Surgery*, **136**:412-421, (Sept.) 1953.
7. Trueblood, D. V.: Additional Experiences with Parotid Gland Tumors, *Western J. Surg., Obstet., and Gynec.*, **57**:463-468, (Oct.) 1949.
8. Martin, H.: Operative Removal of Tumors of the Parotid Salivary Gland, *Surgery*, **31**: 670-682, (May) 1952.
9. McWhorter, G. L.: The Relations of the Superficial and Deep Lobes of the Parotid Gland to the Ducts and to the Facial Nerve, *Anat. Rec.*, **12**:149-154, 1917.
10. Hurford, F. R.: The Surgical Anatomy of the Parotid Gland, *Brit. J. Surg.*, **34**:186-187, 1946.
11. Hollinshead, W. H.: *Anatomy for Surgeons*, Vol. 1. The Head & Neck, Page 325, Hoeber-Harper, 1954.
12. McKenzie, J.: The Parotid Gland in Relation to the Facial Nerve, *J. Anat.*, **82**: 183-186, 1948.
13. Foote, F. W., Jr., and Frazell, E. L.: Tumors of the Major Salivary Gland, *Cancer*, **6**:1065-1133, (Nov.) 1953.
14. Clarke, T. H.: Parotid Gland Tumors, *The Surgical Clinics of North America*, **32**:175-193, (Feb.) 1952.
15. Buxton, R. W., Maxwell, J. H., and French, A. J.: Surgical Treatment of Epithelial Tumors of the

- Parotid Gland, Surg. Gyn. Obstet., **97**:401-416, (Oct.) 1952.
16. Hamberger, C. A., and Laage-Hellman, J. E.: A Study of the Post-Operative Course After Parotidectomy with Preservation of the Facial Nerve, *Acta Oto-Laryngologica Supplementum*, **109**:49-55, (Dec.) 1953.
17. Frey, L.: Le syndrome du nerf auriculo-temporal, *Rev. neur., Par.*, 1923, **2**:97-104 (From references Buxton *et al.*).
18. Reissner, D.: Surgical Procedure in Tumors of the Parotid Gland: Preservation of Facial Nerve and Prevention of Postoperative Fistulas, *A.M.A. Arch. Surg.*, **65**:831-848, (Dec.) 1952.
- 104 East Market Street

### More Cancer Could Be Cured.

The present 10 per cent rate of cure for cancer could be increased to 25 even without any new discoveries, a cancer specialist reports. Whether it is increased is "squarely up to you and me" and "how well we act on what we learn," Dr. George E. Wakerlin, Chicago, said in the June Today's Health magazine, published by the American Medical Association. He is head of the department of physiology at the University of Illinois College of Medicine and a member of the American Cancer Society Executive Committee.

An estimated 25,000 cancers are cured each year in this country—an average of 10 per cent with extremes of 85 for skin cancer and less than one per cent for blood cancer.

"With the full application of present knowledge we could cure 25 per cent, with extremes of 98 per cent for skin cancer and one per cent for cancer of the blood." "The difference between 10 and 25 per cent indicates the size of the educational problem facing the American people."

In an article, "Recent Progress in Cancer Research," he said the remaining 75 per cent uncured cancers "will yield only to present and future cancer research." Although scientists do not know what basic change makes a normal cell become cancerous, they know "more about the mechanisms of cancer than about a number of other diseases."

He warns against overoptimism about new and "inadequately proved" remedies, pointing out that cancer cures still are achieved largely by surgery, x-ray and/or radium. These methods also are being improved. Successful surgery now can be far more extensive than before. A radiation machine containing large quantities of radioactive cobalt is now being tested. A more significant advance is in the use of sex hormones which has brought "considerable improvement" and prolonged many lives.

None of the other anti-cancer agents proposed recently has been "generally accepted" by cancer experts, and Dr. Wakerlin said relying on them should be guarded against. "Otherwise false hopes are raised, and patients with operable cancers may postpone surgery or radiation until it is too late."



# Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Medical School Building, University, Va.

Reprints of this and preceding Bulletins may be obtained from this office

September 1, 1954

## Cancer of the Larynx Hoarseness

Approximately four per cent of all cancers occur in the larynx, mostly in men over forty-five. It is estimated that, in this country, 6,000 people die each year of the disease, and that 18,000 people now have unrecognized cancer of the larynx. Yet this is one form of cancer that consistently produces an early symptom — hoarseness.

It is seldom that a patient fails to seek medical advice promptly for hoarseness. *Since cancer of the larynx limited to one vocal cord is more amenable to surgical or radiation treatment than is any other form of internal cancer, the responsibility for the high death rate in cancer of the larynx must rest on the medical profession.*

To cite concrete examples, a man on his way to Florida for the winter stopped off to see a laryngologist connected with one of the Virginia tumor clinics. The patient was going south, on his physician's advice, because of persistent hoarseness. His larynx had not been inspected. This simple procedure resulted in the immediate discovery of an ulcerated growth involving the right cord and anterior commissure. A biopsy was reported as showing carcinoma.

Another man sought the advice of a laryngologist because his hoarseness had not been relieved by a tonsillectomy, performed for that purpose by another physician, again without inspection of the larynx. This patient, too, had cancer of the larynx.

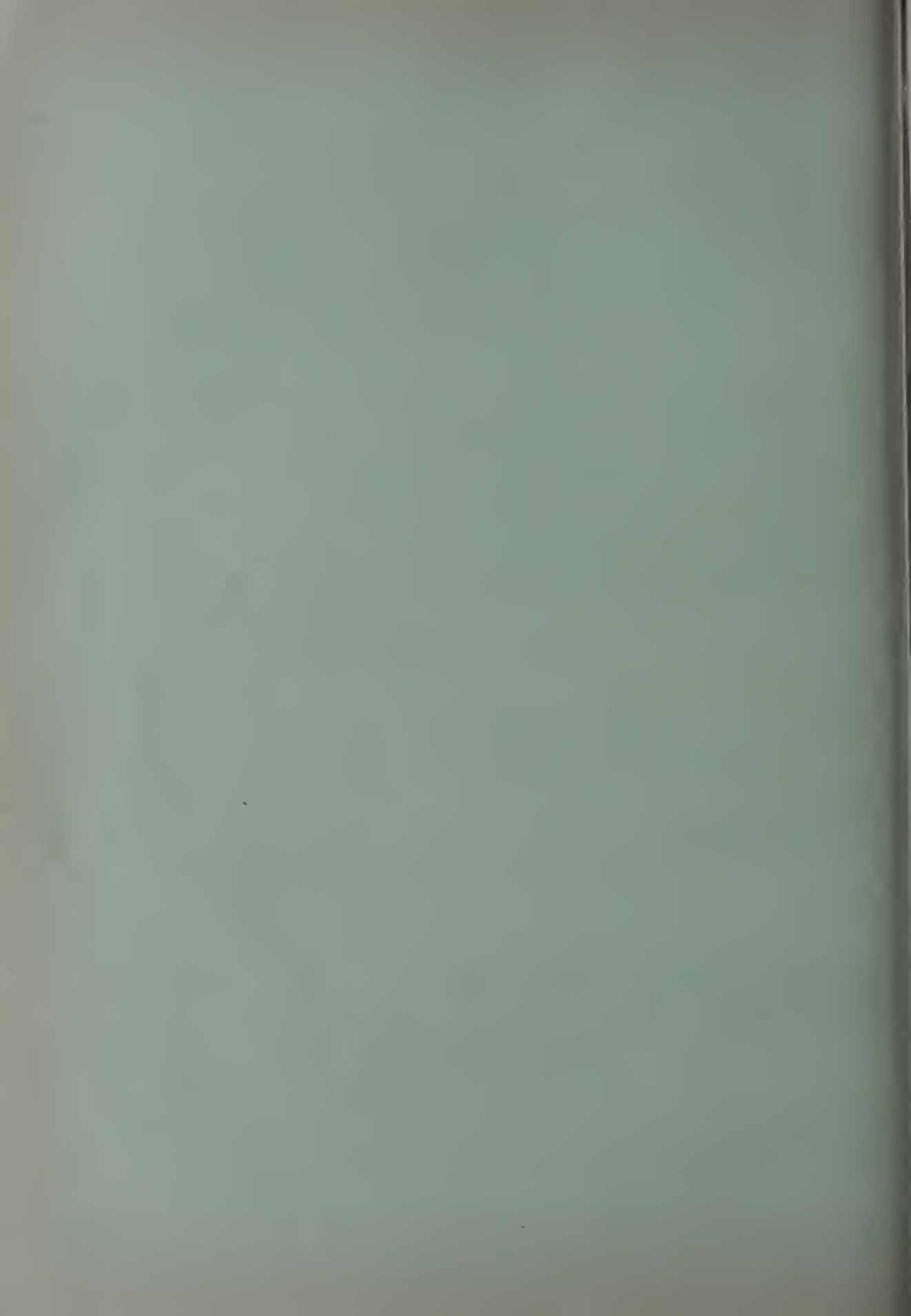
The history of prescription, by physicians, of "cough medicine" for weeks and months because of hoarseness without inspection of the larynx, is repeatedly given by victims of this form of cancer.

*If hoarseness persists over two weeks, the larynx should be inspected.* Full visualization can be readily obtained by means of the laryngeal mirror and direct speculum, through which tissue can be removed for microscopic examination. The physician who does not feel competent to carry out this procedure should insist that his patient be immediately seen by one who is.

Treatment: *Cancer limited to one cord, and many cases in which extension is somewhat beyond this area, can be cured in a great majority of instances by the relatively simple operation of laryngofissure plus local excision of the cancer-bearing area or intensive x-ray therapy.* The risk is negligible and the patient retains a useful speaking voice.

In more advanced cases still limited to the interior of the larynx, the majority are also cured by total laryngectomy, but the patient must learn to speak with a buccal voice. With practice, this voice closely simulates the normal laryngeal voice.

In more advanced cases, in which the growth has become extrinsic, the percentage of cures rapidly diminishes. Treatment consists of total laryngectomy plus radiation, or radiation alone. *That most patients fall in the last category is because the symptom of hoarseness is minimized.*



## SURGERY OF THE BILIARY TRACT\*

FRANK S. JOHNS, M.D.,  
Johnston-Willis Hospital,  
Richmond, Virginia

My preceptor, Dr. A. Murat Willis, (1878-1929), was greatly interested in biliary surgery and did much work in that field. He practiced safe surgery and taught his students accordingly.

Since 1929 great improvements have appeared in the diagnosis of biliary disease and in the technique of its surgical treatment. Yet, in spite of these sound advances, operations on the gallbladder and the hepatic ducts are more hazardous now than formerly. We have attempted recently to search the literature for the cause of this discouraging increase in surgical accidents in the biliary tract. Our findings point regrettably to human errors for surgical accidents in the difficult area of the gallbladder.

The number of surgeons who have completed their training in the past decade has increased tremendously over former periods, and in our country there are no fixed rules for their training. Our great surgical teachers differ widely in method and in the experience and responsibility placed on their assistants. Thus, the training of surgeons is far from standardized. True, we have the Boards, but even their endorsement may miss the supreme question of a man's ability to operate. The board-certified surgeon may have all the answers, yet he may not know how to perform a difficult and frequent operation. A surer test of the applicant's ability as a surgeon might be for some member of the examining Board of Surgery to watch him operate on a short, round-bellied patient for stones in the common duct; also, in order to see how he handles tissues, to have such an applicant perform a subtotal gastrectomy.

The only duct entering the gastrointestinal tract from the liver is the common bile duct. Injury to this duct during a cholecystectomy is usually irreparable. Certain patients may do well; the vast majority of them do poorly.

Since 1945, more than 85 articles have been published on how to repair the common bile-duct. In Lahey's final volume, 41 of 60 pages on "The Biliary Tract" are devoted to the same problem. In his statistics on the Etiology of Strictures, of 239 cases, 208 were attributed to "surgical trauma."

Yet no satisfactory operation has been devised for such repair.

In the past twenty years we have noted a crusade by many surgeons for immediate operation on all cases of acute cholecystitis with stones. Surely, many of such patients can be treated as emergencies with good results. But I wonder if that is sound teaching, and whether or not it may have some bearing on the frequency of serious injuries to the common and hepatic bile ducts. Emergency surgery at its best is seldom good. Odd hours in the operating room are far from the most desirable, although an assistant resident might prefer night surgery with its superior operating privileges for himself. However, as he must learn, the removal of an acutely inflamed gall-bladder can be exceedingly difficult, taxing to the utmost any surgeon's ability, and at least demanding ideal working conditions.

A question frequently asked is when to operate on a case of acute cholecystitis? But how can anyone say when to operate on a diseased gallbladder until he has seen the patient and weighed all the facts involved in his case? In our experience, the time to operate on a gallbladder is based on the patient's condition *at that time*, not on how long he has been sick.

Our selection of operative procedure also depends on the condition of the patient and the pathology found at operation. Whether to do a cholecystectomy or a cholecystostomy should be the surgeon's decision after he has opened the abdomen. For every case we try to follow three sound rules:

- (1) The patient must be properly prepared and able to tolerate the operation.

- (2) The patient's complete relaxation must be secured, and for this the services of a competent anesthetist are mandatory. A good surgeon with a poor anesthetist may do a poor job. Some twenty years ago we called to the attention of this Society the importance of having a licensed physician in charge of anesthetics at every hospital. Nothing could have been more unpopular; today the idea seems less radical. Incidentally, for the past thirty years at the Johnston-Willis Hospital it has been

\*Read before the annual meeting of The Medical Society of Virginia, at Roanoke October 18-21, 1953.



our good fortune to have as chief anesthetist a licensed physician who is well trained in anesthesia.

(3) The third rule of safety for every operation

our cases, namely, proper preparation, thorough relaxation, adequate exposure. We have also had competent assistants, another essential; this difficult surgery cannot be safely carried out with poorly-

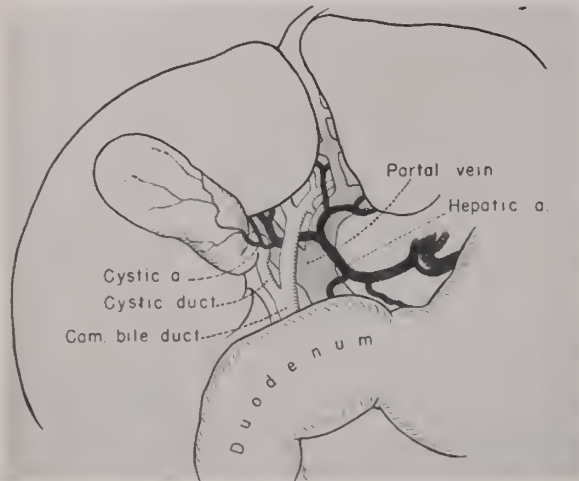


Fig. 1.—Anatomy of the Biliary Tree.

on the gallbladder is adequate exposure. The incision must be of sufficient size to allow a thorough exploration of the gallbladder and of the common

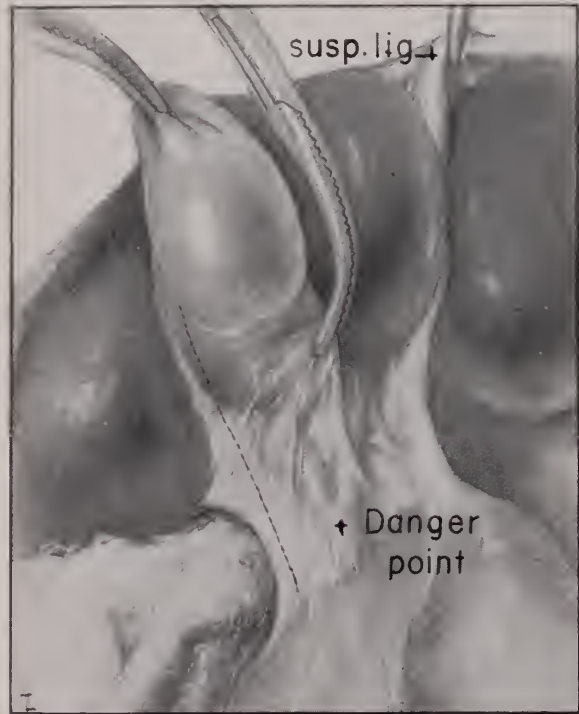


Fig. 2.—Beginning the dissection.

and hepatic ducts, with any anomalies which may be present.

We have attempted to follow this routine in all

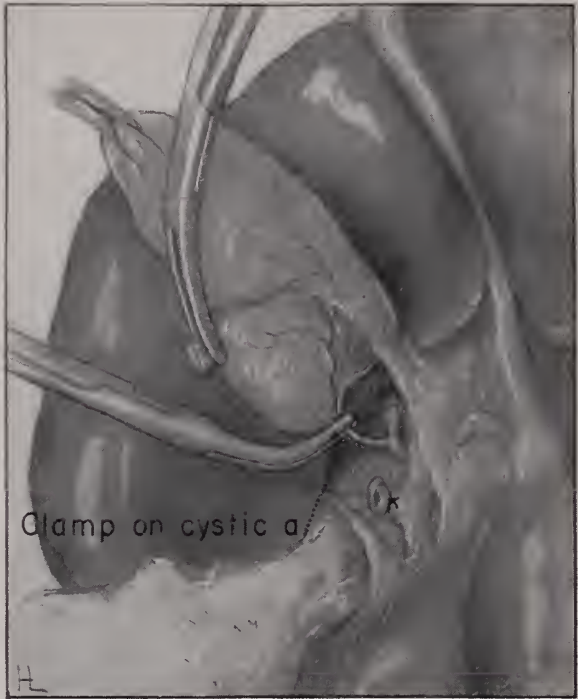


Fig. 3.—Demonstrating the cystic duct and cystic artery.



Fig. 4.—Showing the ligature put in below the clamp.



Fig. 5.—Demonstrating the duct under tension. Clamp improperly applied.

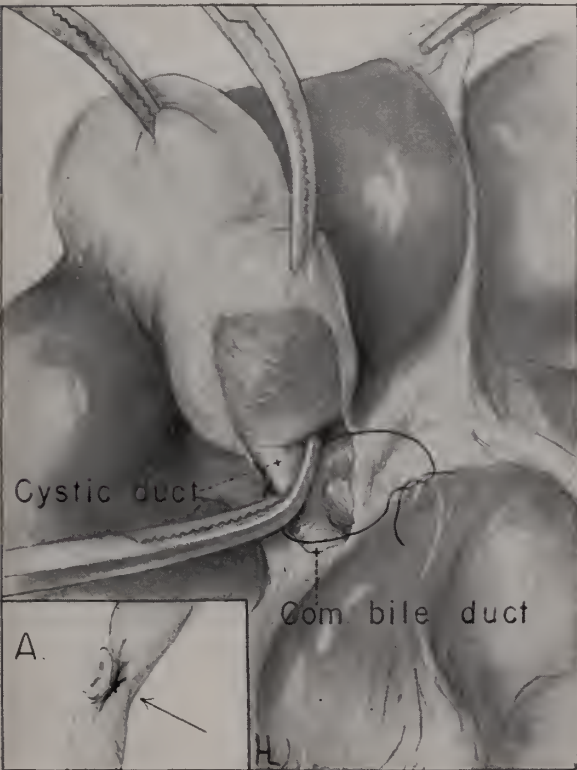


Fig. 6.—Hemostat frequent injury to the common duct.

trained assistants. Acknowledging these advantages, we may state that there have been no known injuries to the ducts in our series of operations on the gallbladder.

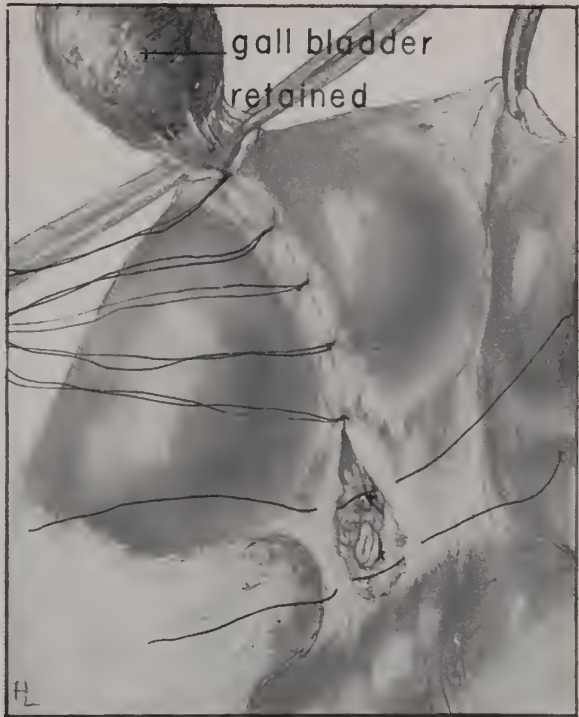


Fig. 7.—Closure of peritoneum.

GALLBLADDER OPERATIVE CASES  
Johnston-Willis Hospital

January 1, 1913 to October 1, 1953

1869 Cases	Mort. rate
<i>Not Drained</i>	
Cholecystectomies ----- 902 (48.26%) -----	.78%
<i>Drained</i>	
Cholecystectomies ----- 629 -----	2.70%
	(51.74%)
Cholecystostomies ----- 338 -----	5.03%
Chronic ----- 1194 (63.88%) -----	
Acute ----- 675 (36.12%) -----	
Total ----- 1869 -----	2.20%
Average age 50 years	

The exposure of the gallbladder, the cystic duct, and the cystic artery must provide the anatomical landmarks whose identification will protect the common duct. The cystic duct should be dissected free, so that a Kelly hemostat can be put between it and the cystic artery. Transfix the duct with a ligature placed far enough from the common duct to prevent

stricture of the duct. Never apply a hemostat to the cystic duct until the duct has been ligated; then apply it proximal to the ligature. If this procedure is carried out, a hemostat will never bite into the common duct during this part of the operation. Careful ligation of the cystic artery should be done independently and well away from the common duct. Bleeding from a cystic artery which has been poorly exposed, followed by hasty application of a hemo-



Fig. 8.—Dissection begun at the fundus.

stat, is in our opinion the greatest cause of irreparable damage to the common duct. We must also realize that pathology will distort the normal anatomy, and that accessory ducts are frequently present to be dealt with. An accurate closure of the dissected surface will usually ligate all of them.

If there is any question about the identification of the cystic duct or cystic artery, the dissection

should begin at the fundus of the gallbladder, so that both the cystic duct and artery can be plainly seen at the completion of the dissection. Our practice is always to attempt a clean dissection of the gallbladder from the liver, with the idea of closing over the raw surface after complete hemostasis leaving as little raw surface as possible for adhesions. If possible close the cavity without drainage.

In our series no attempt is made to remove all diseased gallbladders, if we feel that a cholecystectomy cannot safely be done. The safety of the patient is our chief concern. The removal of stones and drainage of the gallbladder remains a good operation for many patients who must be evaluated as poor risks.

Finally, in all gallbladder surgery we must remember that damage to the common duct is usually permanent, crippling if not fatal, and that repairs are most unsatisfactory. As surgical teachers our attention should be directed specifically to this paramount problem in biliary surgery: how *not to injure* the ducts—not how to repair them.

If the following rules are meticulously taught and observed there will be no injuries to the common or hepatic ducts:

- (1) Have a competent anesthetist.
- (2) Use an incision liberal enough to deal with abnormal as well as normal anatomy to be encountered.
- (3) Recognize abnormal as well as normal structures.
- (4) Ligate cystic duct before applying hemostat.
- (5) Ligate cystic artery independently.
- (6) Do not try to complete the cholecystectomy on every patient.
- (7) Perform cholecystostomy or partial cholecystectomy on the more difficult cases.
- (8) If unable to identify cystic duct and cystic artery, always begin dissection at the fundus.
- (9) Remember that the safety of the patient is our first consideration. It is more important than a complete cholecystectomy.



## UNNECESSARY PAIN

MILTON ENDE, M.D.,  
Petersburg, Virginia

One of the principle functions of a physician is to relieve pain. Unfortunately, due to the training of nurses and doctors, this most important aspect of clinical medicine is frequently neglected. Only too often the suffering patient, especially after operation, is forced to wait another hour or so because the clock says it is too soon for another hypodermic. The main argument advanced against giving it is that the patient may become addicted to the drug. This fear is unjustified and frequently causes unnecessary harm in doctor-nurse-patient relationship. A patient, forced because of an order which originated many years ago in medicine, that is morphine sulfate grain 1/6 every four hours p.r.n. for pain, finally complains to the family which in turn calls the physician. This situation should not arise. Orders for pain should be written p.r.n., and an accompanying order should be that the nurse should ask the patient every two hours "do you have any pain?" This should be charted the same as temperature or pulse and the physician would be amazed how often the patient will reply in the affirmative. Pain intensity varies from moment to moment and it is impossible to give a patient adequate relief of pain unless the nurse is able to have sufficient latitude to give injections as the need arises.

Another even more distressing evil is the giving of sterile hypodermics to patients. The doctor who orders such is in dire need of a consultation. It either means he does not know what is wrong with his patient or if he does he is not capable of coping with the situation. If the patient has pain, certainly he is entitled to relief; if the individual is a psychoneurotic, this is not the proper method of handling the case.

Nothing is more exasperating than to hear a nurse state that she gave Mr. So and So a sterile hypodermic and the patient went to sleep. It is quite possible for a patient to go to sleep while having organic pain. All organic pain is accompanied with some psychic stress in addition. Expecting some relief from an injection, the average individual will feel better even if the injection does not contain opiate. It is only the true addict who will immediately suspect that he has been given water and

continue to complain. The nurse who gives a patient a sterile hypodermic is in great need of a reprimand.

The fear of drug addiction fills far too great a place in the minds of most nurses and doctors. Reported below are 3 (three) cases where patients took large quantities of Demerol. In each instance when need for the drug ceased the patient was taken off the medication in 48 to 72 hours without any withdrawal symptoms and with the patient remaining off the medication.

*Case 1:* A 70 year old, white, female was admitted to the hospital suffering from fractured pelvis and fracture of both knees. Her husband had been killed in the same accident. In addition to the above, the patient had chronic cholecystitis. It required a running battle with nurse and attending surgeon to give the patient adequate pain relief. The comment was, "Doctor, you are going to make an addict out of her." This was heard often and each day. This patient was given Demerol over a period of three months. When she no longer had pain the drug was stopped. No withdrawal symptoms resulted. The patient has now gone eight months and has not asked for further hypodermic.

*Case 2:* A 25 year old, white, male, chiroprapist, was operated upon for cholelithiasis and cholecystitis. During the operation it became necessary to open the common duct. Following operation, the patient had a very stormy course. He began having severe episodes of abdominal pain. These persisted after he left the hospital and he was permitted to give himself Demerol. Numerous studies and consultations failed to reveal a cause for his pain. The family and attending surgeon were very much concerned with the large quantity of drug required to relieve the patient's discomfort. This frequently amounted to 30 cc. daily. It was felt by several consultants that the pain must be on a psychoneurotic basis. This brings up one of the rules in medicine that the physician should hesitate to break—that is, that one is seldom justified in assuming that pain is of an emotional nature when an organic cause is known to have existed. Suddenly the attack stopped and over a period of a few days the patient just as quickly stopped taking his injection on his own.

No withdrawal symptoms resulted. The patient is now working daily and has had no further narcotic over a period of three months. There has been no satisfactory explanation of the patient's pain.

*Case 3:* A 55 year old, white, female had frequent migraine headaches. These headaches had not been controlled by the usual and various medications. The patient, in addition, developed a bleeding ulcer. In an effort to alleviate the complication of migraine headache, she was started on Demerol. Subsequently the patient had a gastric resection with discontinuation of her ulcer symptoms. However, her headache persisted and she gradually began taking large quantities of Demerol until finally she reached 30 cc. daily. It was felt that the patient had probably become addicted to the drug and hospitalization was urged. The drug was discontinued entirely in 72 hours and no withdrawal symptoms resulted. She

has had no further Demerol. She has expressed no desire for any. It was felt that this patient would surely have addiction symptoms.

There is no question that Demerol can become addicting<sup>1</sup>. However, it has to be given in tremendous dosage and for a longer period of time than is commonly supposed<sup>2</sup>. Its wide range permits the physician to be far more generous with his pain relief. If any questionable case, it is far better to give the patient temporary relief from Demerol rather than risk causing needless discomfort to a patient in genuine need.

#### REFERENCES

1. Himmelebach, R. C.: Arch. Internal Medicine, **71**: 345, March, 1943.
2. Botheman, C. K.: Jour. Pharmacology and Experimental Therapy, **75**: 64, May, 1942.

*Petersburg General Hospital*

#### Boric Acid in Talcs Can't Hurt Babies.

Two New York physicians said that dusting powders containing small amounts of boric acid can be used safely for babies. Infant deaths from boric acid solutions have been caused only by "ignorant" or accidental misuse of strong preparations. Standard baby powders "carefully tested and manufactured by ethical firms" usually contain no more than five per cent boric acid. This amount cannot hurt a baby, even if dusted on irritated skin, the physicians said in the July American Journal of Diseases of Children, published by the American Medical Association. In fact, boric acid counteracts the possibly irritating qualities of talc. Tests on 66 infants at the New York Foundling Hospital showed boric acid in five per cent concentrations is "practically unabsorbed through the intact skin of infants" even where there is a rash.

The "considerable attention" given in recent years to the "dangers and hazards" of misusing boric acid was "rightly inspired by the regrettable reports of accidental deaths, especially in small infants," Drs. Alfred J. Vignec and Rose Ellis said. However, it

is unfortunate that it has not been made clear that all deaths have been due to "accidental, ignorant and at times negligent handling" of solutions, ointments and powders containing high concentrations of boric acid. The greatest number of fatal cases have been from the accidental swallowing of boric acid by newborn infants. To abandon use of baby powders because of these reports is "absurd". If we eliminated everything containing boron or its compounds, we would have to stop eating lamb, fish, crabs, lobsters, chicken, and eggs.

The physicians said the practical lesson to be learned is that powdered boric acid should not be dispensed "over the counter" to the public, and boric acid solutions should not be permitted where "any possibility of human error" in their administration may exist.

"This does not mean that one should abandon the use of talcs which contain small amounts of boric acid in nonabsorbable form, since there is no evidence whatsoever . . . that such products are dangerous".

## THE MEDICAL SOCIETY OF VIRGINIA

Report on Actions of the House of Delegates  
of the AMA in San Francisco

June 21-25, 1954

The highlight in this meeting was the inauguration of Dr. Walter B. Martin of Norfolk as President of the Association. Dr. Martin has done excellent and laborious work for the AMA for many years, particularly during his term as President-Elect and fine leadership by him is assured during his term as President. Virginians should be very proud of his record and present high position. In his inaugural address, Dr. Martin urged physicians to keep down the high cost of hospitalization and to sponsor plans that would provide hospitalization in all economic levels.

Dr. Elmer Hess of Erie, Pennsylvania, was elected President-Elect. Dr. Hess has been actively at work in the Association for many years and has been chairman on the important Council on Medical Service.

Dr. J. Morrison Hutcheson of Richmond, Virginia, was elected to the Judicial Council. This body is the "Supreme Court" of the AMA and has many important and difficult problems referred to it.

The House had many resolutions referred for action. Some of these were deferred for final action to the December meeting.

The general problem of Fee Splitting was discussed and the House reaffirmed its previous position. A specific resolution to permit two or more doctors to render a joint bill was defeated, but it was agreed that such a bill could be rendered when required by certain Insurance Companies. Doctors, however, should render separate bills.

The question of members becoming active on the faculties of Schools of Osteopaths was deferred to the December meeting in order that information may be obtained on their curricula by on-campus visits.

The New York delegation advocated changes in the Principles of Medical Ethics designed to prevent members from participating in Closed Panel Plans when the plan is operated for profit by a corporation and uses unethical methods such as advertising and solicitation to obtain members for the Panel. This was referred to the Judicial Council for investigation and report not later than the next Annual Meeting.

The House condemned the method of determining

presumptive service connected disability by legislation and reaffirmed the policy of discouraging treatment of non-service disabilities of veterans in VA Hospitals.

The question of evaluation of foreign school graduates was returned to the Council on Medical Education and Hospitals for further study.

The registration of hospitals was discontinued and the Joint Commission on the Accreditation of Hospitals was requested to undertake this function.

There was some support for discontinuance of the December Clinical Meeting on the ground that it was primarily designed for the General Practitioner and was no longer needed since the organization of the General Practitioners. It was voted to continue these meetings. This action was influenced by the fact that only four cities can accommodate the Annual Meeting and the Clinical Meeting can be taken care of in other places, thus bringing the AMA to more sections of the country.

The House approved of an extension of military scholarships in the National Defense Program on a voluntary basis and with limitation of the number of scholarships in each school participating in the program.

Dr. Edward J. McCormick of Toledo in his Presidential address advocated the adoption of average fee schedules on an area or regional basis. This was referred to the Board of Trustees for study.

It was announced at the closing session that the California Medical Association has presented \$100,000 to the American Medical Education Foundation. It is hoped that this generous gift will stimulate increasing numbers and amounts of gifts from the medical profession to this worthy and important cause.

The Association will hold its Annual Meeting in Atlantic City for 1955, in Chicago for 1956, in New York City for 1957, and in San Francisco for 1958. The meeting next year in Atlantic City will be held June 6-10.

CARRINGTON WILLIAMS, M.D.  
*Delegate*



## PUBLIC HEALTH

---

MACK I. SHANHOLTZ, M.D.

*State Health Commissioner of Virginia*

---

### The Automotive Crash Injury Research Program

In further effort to decrease injuries and deaths from automotive accidents on the highways of Virginia, the State Department of Health has joined the State Highway Police in undertaking a research program in collaboration with Cornell University Medical College. The purpose of the study is to obtain authentic medical information concerning the specific causes of injuries to occupants of passenger automobiles involved in accidents. Accidents which occur in towns and municipalities are not included in the study.

When the proposal to participate in this study was first presented to the State Health Department it seemed to be an excellent idea, but no action could be taken without the consent of The Medical Society of Virginia. Accordingly, a full outline of the plan was presented to the Executive Committee of the Council, and approval was obtained.

The next step was to review the reports of accidents on highways of the state and to decide which areas would produce the most information. Several areas were listed for consideration and it was decided that Spotsylvania, Stafford and King George Counties would be used first in the study. This decision was reached not solely because of the number of accidents in the area but because of available cooperation to permit accurate study.

A meeting of the local Medical Society was held at the Mary Washington Hospital in Fredericksburg to which were invited the Executive Secretary of The Medical Society of Virginia, a representative from the State Health Department, the Director of Health of the three counties and officers and troopers of the State Highway Police. Several members of the research team from Cornell University Medical College outlined the proposed study to the members of the Medical Society and guests. The society went on record as approving the program and the physicians expressed their interest and willingness to

participate. Following this meeting the research team explained the program to the administrator of the Mary Washington Hospital, to the groups serving in the emergency room of that hospital, and to the rescue squad of Fredericksburg. The state troopers patrolling the highways of the area were briefed by the Cornell men and by their own officers. It was explained to all that the study in any area lasts for a period no shorter than four months and no longer than six months and that its success depends upon the complete cooperation of those who investigate the accidents and those who care for the injured.

The State Highway Police are the first on the scene and they bring into the study any accident occurring in the selected counties in which a passenger automobile is involved and a person is injured. They make a report on the forms supplied by Cornell University Medical Center. These forms deal with the car, the people, estimated speeds, description and sketch of the accident, type of collision, rollover and type of rollover, doors—whether opened or jammed shut during accident, whether occupants were thrown from car and if so, a description; how the windshield was involved and if passengers struck windshield; the same in regard to instrument panel, steering wheel, steering column and other parts of the car. Photographs taken at the scene of the accident also form a part of the report.

The doctors or hospital in the area seeing the patient submit a medical report and fill in anatomical charts showing locations of injuries. They give descriptions of the injuries and opinions as to outcome or state the outcome if case is closed. These reports go to the local medical director of health and are sent by him to the Bureau of Communicable Disease Control of the State Health Department twice each month. Here they are reviewed and are then forwarded to the Central office of the State Highway Police. From there they go the Cornell University Medical College for statistical and other studies in the Crash Injury Research Center.

Similar data-collecting systems have been set up in several other states and the interstate program promises to yield, for the first time, a new type of information badly needed by engineers and safety groups. All major automobile manufacturers are actively cooperating with this project. The information will be useful to military, insurance, public health and safety organizations as well. Changes in automotive designs are costly and if such changes are to be used to protect drivers and passengers during accidents, new information, based on statistical analysis of these accident-injury facts must be conclusively presented to permit manufacturers to make practical use of the data.

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	July 1954	July 1953	Jan.- July 1954	Jan.- July 1953
Brucellosis .....	3	2	21	28
Diphtheria .....	1	2	26	53
Hepatitis .....	188	210	2785	1447
Measles .....	1117	303	23169	4482
Meningococcal Infections .....	4	9	71	138
Poliomyelitis .....	70	156	105	193
Rocky Mt. Spotted Fever .....	10	17	22	39
Streptococcal Infections .....	223	349	3263	3797
(Including Scarlet fever)				
Tularemia .....	4	3	24	18
Typhoid Fever .....	2	9	30	28
Rabies in Animals .....	29	36	254	299

## New Books

The following are among the books recently received at the Tompkins-McCaw Library of the Medical College of Virginia. They are available to our readers under usual library rules.

- Ackerman and Del Regato—Cancer; diagnosis, treatment and prognosis, 2nd ed., 1954.  
 Annual review of biochemistry, 1954.  
 Autotrophic micro-organisms, 4th symposium of the society for general micro-biology, 1954.  
 Birnbaum—Anatomy of the bronchovascular system; its application to surgery, 1954.  
 Bourne and Kedder—Biochemistry and physiology of nutrition, Vols. I and II, 1953-1954.  
 Ciba Foundation—Peripheral circulation in man, 1954.  
 Dublin—Fundamentals of neuropathology, 1954.  
 Edwards, et al—An atlas of congenital anomalies of the heart and great vessels, 1954.  
 Feinberg—The atom story, 1953.  
 Fishberg—Hypertension and nephritis, 6th ed., 1954.  
 Fleming—Guide to the literature of the medical sciences, 1953.  
 Flint—Emergency treatment and management, 1954.  
 French's Index of differential diagnosis, 7th ed., 1954.  
 Galdston—Beyond the germ theory, 1954.  
 Gertler and White—Coronary heart disease in young adults, 1954.

- Grollman—Acute renal failure, 1954.  
 Hale—Anesthesiology, 1954.  
 Hodgson—The deaf and their problems, 1953.  
 Horder—Fifty years of medicine, 1954.  
 Ingraham and Matson—Neuro-surgery of infancy and childhood, 1954.  
 Johns—The physics of radiation therapy, 1953.  
 Josiah Macy Foundation—Shock and circulatory homeostasis, 1954.  
 Klendshoj—Fundamentals of biochemistry in clinical medicine, 1953.  
 Lenzen—Causality in natural science, 1st edition, 1954.  
 Lukens—Medical uses of cortisone, 1954.  
 Proceedings of the second national cancer conference, Vols. I and II, 1954.  
 Sebrell and Harris, editors—The vitamins, Vols. I and II, 1954.  
 Simons—Medical mycology, 1954.  
 Strauss—Reason and unreason in psychological medicine, 1953.  
 Symposium on operative surgery and recent advances in ophthalmology, 1953.  
 Symposium of the 6th International congress of microbiology, Vols. I-VI, 1953.  
 Transactions of the American association of obstetricians and gynecologists and abdominal surgeons, 1954.  
 Weil and Saphra—Salmonellae and shigellae, laboratory diagnosis, 1953.  
 Wolff—Stress and disease, 1953.

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.,

*Commissioner, Department Mental Hygiene and Hospitals*

### Comments Regarding the New Diagnostic Classification of Mental Disorders Adopted by the American Psychiatric Association in 1952\*

It is felt that physicians other than psychiatrists will be interested in recent developments in the classification of psychiatric disorders in the last few years. In the period prior to World War II the classification of mental disease was suited for the needs and case loads of public mental hospitals. The classification followed largely that introduced by Kraepelin and used in the "Statistical Manual" for the use of hospitals for mental diseases. After official adoption in May, 1917 by the Committee on Statistics of the American Association (then the American Medical Psychological Association) certain revisions were made during the following years but in general the classification was largely unchanged.

Psychiatrists on active duty in induction stations and in the Veterans Administration Hospitals in World War II found themselves dealing with mentally ill patients and confined to a system of nomenclature that was not suitable for about 90% of the patients handled. These included relatively minor personality disturbances, psychosomatic disorders, psychoneuroses, and psychological reactions to the stresses of combat. Following the adoption of new nomenclatures by the Army and Veterans Administration, the Committee of Nomenclature and Statistics of the American Psychiatric Association, after determining the opinion of the American Psychiatric Association members in general, concluded that a change in official nomenclature was urgently needed. To this end, after considerable study, a revision was established and this has since been officially adopted. It was published in the Diagnostic and Statistical Manual in 1952 and is now in general use throughout mental hospitals and in psychiatric clinics.

With this background it is felt that physicians in various medical fields will be interested in some outstanding changes and points of view represented in the new classification.

There are acute brain syndromes as distinguished from chronic brain syndromes. The acute are the

organic brain syndromes from which the patient recovers and are the result of temporary reversible diffuse impairment of brain function such as is present in acute alcoholic intoxication or "acute delirium". The chronic organic brain syndromes result from relatively permanent, more or less irreversible, diffuse impairment of cerebral tissue function. Under this we find chronic brain syndrome associated with general paresis, meningovascular syphilis, intoxication, brain trauma, cerebral arteriosclerosis, senile brain diseases, etc.

In this particular group of chronic brain syndromes, qualifying phrases are used and cases are labeled as falling in one of four groups: with psychotic reaction, with neurotic reaction, with behavioral reaction, and without qualifying phrase.

The functional psychoses of the former classification are in general included under "Disorders of Psychogenic Origin" or "Disorders without clearly defined physical cause or structural change in the brain." These are designated as reaction rather than psychoses and we have the involutional psychosis, the affective reactions, consisting of the manic depressive reactions, manic type, depressed type, and other types and, in addition, there is a new grouping designated as psychotic depressive reaction. The schizophrenic reactions are continued with four traditional types, simple, hebephrenic, catatonic and paranoid, and to these are now added five other groups, namely, acute undifferentiated type, chronic undifferentiated type, schizo-affective type, childhood type and residual type.

The classification considers what we have considered as "psychosomatic disorders" under the more desirable heading "Psychophysiologic Autonomic and Visceral Disorders". These disorders are given as a separate grouping between psychotic and psychoneurotic reactions. They include the so-called "organ neuroses" and also cases formerly classified under a wide variety of diagnostic terms such as "anxiety state", "cardiac neurosis", "gastric neurosis", etc. The categories follow the various organs through which the symptoms are expressed; for example, psychophysiologic skin reaction, psychophysiologic musculo-skeletal reaction, psychophysiologic respiratory reaction, etc. This particular category will merit

\*Article prepared by Joseph R. Blalock, M.D., Superintendent, Southwestern State Hospital, Marion, Virginia.



the interest of all those in general medicine and will become more clearly outlined with the accumulation of data.

The psychoneurotic disorders is the next section. The symptom "anxiety" is the chief characteristic of these disorders and the placement in a particular group is based on the outstanding reaction. There are some simplifications in the categories used in the former classification; for example, we have anxiety reaction, dissociative reaction; conversion reaction, phobic reaction, obsessive compulsive reaction, depressive reaction, and psychoneurotic reaction, other.

A challenging section of the new classification is that of "personality disorders". According to the statistical guide these disorders are characterized by developmental defects of pathological trends in the personality structure, with minimal subjective anxiety, and little or no sense of stress. In most instances the disorder is manifested by a life long pattern of action or behavior, rather than by mental or emotional symptoms. The personality disorders are divided into three main groups, personality pattern disturbance, personality trait disturbance, and sociopathic disturbance, with a special group entitled "special symptom reaction" to allow flexibility in diagnosis. The personality pattern disturbance group embraces inadequate personality, schizoid personality and cyclothymic personality. The personality trait disturbance group is divided into the emotionally unstable personality, the passive aggressive personality and the compulsive personality. The sociopathic personality disturbance includes the antisocial reaction, dyssocial reaction, sexual deviation, and addiction. It will be noted that this group includes in general the old psychopathic personality group. The point is made that these individuals are ill primarily in terms of society and in terms of conformity with prevailing customs. These sociopathic reactions, however, are very often symptomatic of

underlying personality disorders, neurosis or psychosis or occur as a result of organic brain disease or injury.

A valuable grouping included in the classification is that of "transient situational personality disorders". The various groups coming under this heading are helpful and are "transient situational personality disturbance", "gross stress reaction", "adult situational reaction", "adjustment reaction of infancy", "adjustment reaction of childhood", "adjustment reactions of adolescence" and "adjustment reaction of late life." This particular diagnostic group has been of considerable value in our state hospitals.

From the standpoint of value in the diagnosing of patients admitted to state hospitals, this general diagnostic classification represents a definite advance over that previously used. It seems to be the best workable type of classification that can be used at present but it is also felt that there will be certain modifications and changes as time goes on. It permits certain resources in realistically classifying our patients. For example, the concept of considering chronic brain syndromes from the standpoint of whether or not they are psychotic, neurotic, or behavioral problems is very helpful. We see a number of patients with cerebral arteriosclerosis whose picture is not psychotic but is behavioral or neurotic. The psychotic depressive reaction is a helpful addition. The additional resources in classifying our schizophrenic reactions have frequently been called upon, particularly the schizo-affective type, and the chronic undifferentiated type.

No comment is made upon the provision for mental deficiency and for convulsive disorders.

In making these comments the author wishes to state that he made free use of the publication "Mental Disorders" and the "Diagnostic and Statistical Manual of the American Psychiatric Association, Mental Hospital Service", published in 1952.

---

## NOTES ON PULMONARY TUBERCULOSIS\*

### Modern Therapy (II) Indications (A)

There are two facts about every case of pulmonary tuberculosis that are of common and paramount concern to the patient, his physician, and to health authorities: (1) Does the patient need treatment for his own sake?; (2) Is he actually or potentially communicable? All other considerations are of secondary importance, by comparison.

If the answer is "Yes" to either question, the patient has *active* tuberculosis! *It is as simple as that*, according to a "working definition" of "activity" in tuberculosis prepared several years ago by the Virginia State Health Department for the convenience of Health Directors and their staffs, affiliated with its Division of Local Health Services.

The definition, "For *practical* purposes, activity means tuberculous infection or disease of such type or extent as to constitute an *immediate* and definite *hazard* to the health or life of the person affected—together with an actual or potential danger of infection to those with whom he comes in contact".

The existence of any kind of hazard implies consideration of measures to offset or overcome the seeming peril. In tuberculosis, degree of hazard must always be weighed against available treatment potential, as applied to each individual case. There will be instances (as the "good chronic", etc.) where the time and money involved in attempting to achieve *complete* cure would be out of all proportion to the threat to the patient's life and health which would remain without such treatment, not to mention the latter's probably futility in terms of prospective cure.

Treatment, if any, taken by this class of patients, is usually directed at "control" of the disease rather than cure. These patients accept the residual hazard; they are incurable. They learn to live *with* tuberculosis as best they can.

Fortunately, the vast majority of patients are clinically curable. For these, therefore, the presence of active disease invariably implies need for curative treatment and the patient should be eager and willing, both for his own sake and for that of others, to pay any price within reason that may be required by Nature, with or without appropriate adjuvants,

to render his disease inactive (and non-communicable).

It naturally follows that as long as a person takes *any* treatment for tuberculosis he takes treatment for the active component of his disease, whether for cure or "control" and whether the disease for which treatment is indicated can be demonstrated objectively (clinical) or must merely be presumed to be present (sub-clinical). Fibrosis and calcification per se, as well as other residue, however labelled, but likewise not regarded as constituting in and of themselves a *definite* hazard to the patient's health or life, obviously require no treatment.

*Treatment* of tuberculosis (other than by drugs, surgery, etc.) may properly be defined as "any deviation in a person's normal life pattern, undertaken *expressly* for the purpose of supplementing the *rest* he gets normally, to effect control of an active tuberculous lesion, or for the purpose of converting an active case of tuberculosis into one which is inactive".

Someone has said, "*All that is not rest is exercise*". *The reverse also holds true!* Accordingly, since basic treatment for tuberculosis consists of systemic *rest*, however, whenever, and wherever taken, quantitative appraisal of a treatment schedule must be made upon a broad basis of how much *total rest* the patient achieves during every *twenty-four hour period*, as long as *any portion* of the rest obtained, has been prescribed or is being taken for the *specific* purpose of overcoming or controlling *active* disease. Only when a point is reached where *no rest* is taken for the specific purpose of overcoming or controlling active tuberculosis, can the very considerable variations in residual rest normally obtained by different people, be discounted as wholly without therapeutic connotation.

\* \* \* \* \*

Findings generally agreed upon by the medical profession to indicate an immediate *definite* hazard (in contrast, for example, to a mere positive tuberculin reaction in an apparently healthy individual) to the health or life of the person who has pulmonary tuberculosis are:

\*Prepared by the Virginia State Health Department.

1. Sputum (or gastric lavage) positive for Tubercle Bacilli.
2. A series of x-rays in the known tuberculous subject, showing an "unstable" lesion i.e., comparison of serial films reveals evidence of spread, or of clearing of x-ray shadows attributed to the disease; or, the presence of x-ray shadows in a single film, that are typical of active pulmonary tuberculosis, by reason of their intrinsic appearance, in a known case or suspect, *with necessary supporting evidence*.
3. Symptoms characteristic of tuberculosis interpreted by the attending physician to be due to tuberculosis in the particular case under consideration.
4. Physical signs (rales). These sometimes precede, often accompany x-ray evidence of active disease; rarely they may persist for a time after the x-ray shadows with which they were associated, have disappeared. Like x-ray and symptoms, signs always require interpretation in the light of the total clinical picture.

The presence of *any* of these, *when ascribed to tuberculosis*, would constitute *tangible* evidence of *clinically* active disease. In the opinion of the State Health Department, an entity of "sub-clinical" activity should be added, using a fifth criterion.

5. A history of having had a positive sputum, or other characteristic x-ray, physical, or symptomatic evidence of active disease (as enumerated above) comparatively recently (in the *known* tuberculous subject.) From such a record one can with good reason postulate or "presume" the persistence of *residual* "sub-clinical" or "sub-visible" activity for a variable period of time *after* all tangible evidence of active disease has disappeared, *and for which formal treatment should be expressly prescribed*, the same as for *clinically* active disease.

The presence of a "sub-clinical" residual active lesion can be surmised or deduced from:

1. The costly experience of those who in the past have ignored its existence and, in doing so, failed to give its presence due consideration in their treatment schedule, (only to suffer needless "relapse"), and by
2. Direct observation:
  - (a) In surgery (lobectomy) i.e. palpation of

tubercles in the supposedly uninvolved lobes, in areas which were clear on x-ray immediately preceding operation.

- (b) At *autopsy*: discovery of tuberculous lesions in areas of the lung which had been clear upon x-ray shortly before death.
- (c) On stereoscopic x-ray: light infiltrations sometimes cast a shadow in one plane and not, or to a *much* lesser degree, in another. The optimum plane cannot be anticipated by the roentgenologist; accordingly he *may* miss a small residual lesion entirely, on the single conventional film.
3. Well known obscuring effects on active lesions by denser overlying scar tissue or "fibrosis".
4. From what is known about the pathology of tuberculous processes generally, *retrogressive* as well as progressive lesions *naturally* must be expected to pass through a microscopic, roentgenologically non-discernible stage (in course of healing).

\* \* \* \* \*

It is sometimes difficult to establish, and often impossible for the physician and the Health Department to keep close tab on the sputum status of a patient. Too often the patient does not coöperate in providing satisfactory specimens at appropriate intervals; many patients have no sputum from the beginning or later cease to have sputum, or the latter may be alternately positive and negative in a most disconcerting way were one to attach *too* much significance to the bacillary content, as an indicator of activity.

For these reasons Public Health Workers in Local Health Departments, affiliated with the Virginia State Health Department, are taught, as noted above, to regard as active *any case for whom the doctor prescribes treatment* (systemic rest; drugs, etc.) regardless of the term ("quiescent", "arrested", "active", "inactive", "apparently healed" etc.) used by the physician technically to describe the patient's activity status. This applies, even though such sputum examinations, as have been made, (and or gastric washings) are usually or currently negative for Tubercle Bacilli.

Conversely, when the physician does *not* prescribe formal treatment, it is taken for granted that he does not consider the patient's tuberculosis to constitute a definite hazard to the latter's health or life, with-



out treatment; the Public Health Worker classifies these patients, therefore, as "apparently inactive"; the latter take no treatment—they are not considered communicable in a public health sense.

Rare exceptions would be where a patient with incurable tuberculosis, with or without a continuously positive sputum, was regarded by the physician to be in need of *no* formal treatment *even to control* his disease.

Where the physician expresses doubt with reference to activity status as indicated by frequently encountered terms such as "Questionably active"; "Doubtful activity"; "probably inactive"; the Public Health Worker can promptly assign each to its proper category in the register i.e., "Active" or "Apparently Inactive", on the basis as to whether or not treatment concurrently is prescribed. For example: "Questionably active" *with* treatment = ACTIVE; "Questionably active" *without* treatment = APPARENTLY INACTIVE.

Specialists in tuberculosis are virtually in universal agreement that the babble of words now used to describe activity status, is most confusing to every one. They are *not* in agreement as to what to do about it. In the meantime, the Virginia State Health Department has developed the simple formula described, by which the *score* or more of terms normally encountered by the Public Health Worker (and others) can be reduced to three, i.e., ACTIVE, APPARENTLY INACTIVE, and INACTIVE. In actual practice this classification has proven to

be not only absurdly easy to apply, but extremely useful to those responsible for organizing comprehensive programing of Public Health Nursing services. Based as it is on the ancient truism "actions speak louder than words" it is also scientifically unassailable.

It is perfectly obvious, of course, that every physician is *obliged* either to prescribe treatment or not to prescribe treatment for every tuberculous patient under his care, thereby *automatically* determining his patient's activity status (according to the health department formula) both for the health department *and for himself—should he so desire*. Public health workers in local health departments, associated with the State Health Department, no longer are bewildered by the prevailing bedlam with respect to "activity status" of tuberculous patients. The general practitioner *need* not be!

It should be understood however that the activity status of every new case of pulmonary tuberculosis, as diagnosed and reported, is *also* recorded in the health department, *in the doctor's own words*; this applies as well to the activity status described by him following each evaluation of a known case. *All transcripts* of records furnished to physicians by health departments describe the patient's activity status *exclusively* in the terms used by the patient's attending physician. In this way application of the health department formula by its own staff does not interfere in any way with a physician's *inherent right* to use any system of classification he desires.

### Old "Home Remedy".

Drinking alfalfa seed tea not only won't cure arthritis but may give the drinker skin trouble and the doctor a headache.

A Roanoke physician said the skin trouble is hard to diagnose unless the doctor knows his patient has been drinking the tea. The trouble is, most patients apparently don't like to admit they've been relying on the old home remedy.

Dr. William H. Kaufman reported on two such cases in the July 17th Journal of the American Medical Association. He said he knows of no previous reports of skin trouble from alfalfa seed.

"The practice of taking alfalfa seed for the pur-

pose of relieving arthritis, diabetes, and related disorders is apparently widespread, and there is a strong likelihood that further cases will appear."

He said two patients suffered skin eruptions as a result of the remedy and that four other possible cases have been found. One of his two patients, an elderly woman, said she had concealed the fact that she drank the tea because she was "ashamed to admit it." The other admitted "with great reluctance" that she used the tea.

The Council on Pharmacy and Chemistry of the A.M.A. has received numerous questions about the value of alfalfa preparations in treating arthritis and diabetes. The council reports there is no evidence that alfalfa seed in any form will help.

## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

---

<i>President</i> .....	MRS. K. W. HOWARD, Portsmouth
<i>President-Elect</i> .....	MRS. MAYNARD EMLAW, Richmond
<i>Recording Secretary</i> .....	MRS. LEE S. LIGGAN, Irvington
<i>Corresponding Secretary</i> —	
	MRS. LEMUEL E. MAYO, Portsmouth
<i>Treasurer</i> .....	MRS. WILLIAM C. BARR, Richmond
<i>Publication Chairman</i> .....	MRS. WM. S. GRIZZARD, Petersburg

---

### Northampton-Accomac.

This Society and the Auxiliary were guests of Dr. and Mrs. John R. Hamilton at their home in Nasawadox on July 15th. There were about 65 members and guests present. Dr. Walter B. Martin, Norfolk, President of the American Medical Association was guest speaker, his subject being The Eisenhower Health Program.

Dr. J. Mortimer Lynch, who is retiring from active practice on the Eastern Shore, was honored by the Society and given permanent and honorary membership.

A buffet supper followed the meeting.

CATHERINE R. TROWER (Mrs. Holland)  
*Chairman, Press and Publicity*

### Alexandria.

The Alexandria Medical Auxiliary recently completed the year's work and heard reports of the various chairmen. The following officers were elected: president, Mrs. Christopher Murphy, Jr., vice-president and president-elect, Mrs. William Weaver; treasurer, Mrs. John Zearfoss; corresponding secretary, Mrs. Lewis Mangus; recording secretary, Mrs. Frank Carrol; and parliamentarian, Mrs. Eugene Grether.

The year has been a very successful one under the excellent leadership of Mrs. Eugene Grether. Social

functions included picnics, luncheons, buffet supper and a dinner dance. The members worked faithfully on "The Shoe Center", a project aiding the indigent. They also aided the medical society on Clinic Day and during other meetings of the year. An active part was taken in nurses recruiting and a full scholarship was again financed by the auxiliary.

### Petersburg.

On August 12th, fourteen student nurses from the Petersburg General Hospital were entertained by this Auxiliary. The Nurses Entertainment committee arranged for the girls to spend the day as their guests at the Cavalier Beach Club, Virginia Beach. That night they were entertained at dinner by the Auxiliary. They were accompanied by Miss Doris McCraw, Director of Nursing Education, and Mrs. William S. Grizzard, co-chairman of the Nurses Entertainment committee.

### Personals.

*Richmond*—Mrs. Maynard Emlaw, president-elect of the State Auxiliary, and Dr. Emlaw have been traveling in Europe this summer and had a wonderful trip.

*Petersburg*—Congratulations to Dr. and Mrs. Walter Brennan on the birth of a son.

Congratulations also to Dr. and Mrs. Mark Holt on the birth of their boy.

---

### 500,000 Mark Topped by Orders for New AMA Health Series Pamphlets

A color-bright series of pocket size pamphlets newly published by the AMA public relations department is raising enthusiastic response from state and county medical societies. To date, *more than 500,000 pamphlets have been mailed in answer to orders by state societies* through which the series will be distributed to county organizations and physician members. The four pamphlets ("Why Wait?", "Quack," "Health Today," and "On Guard") briefly discuss the selection of a family doctor, the dangers of cults and quacks, the progress of modern medical research and the AMA program of drug evaluation.

## President's Message



### To the Members of The Medical Society of Virginia

All members are urged to give serious consideration to the Annual Meeting in Washington, D. C., November 1-3. As you undoubtedly know, this meeting will be held jointly with the Medical Society of the District of Columbia, with headquarters, exhibits and meeting rooms in the unequalled facilities of the Shoreham Hotel.

A preview of the program demonstrates that this meeting will be outstanding as to the quality of the papers, symposia, panel discussions and exhibits. The majority of the presentations are by invitation, and the Program Committee has done an excellent job in their selection of eminent speakers. From the descriptions in the applications, the Scientific Ex-

hibits will be very worth-while. Due to the large amount of public space in the Shoreham, the usual congestion around the exhibits will be minimal and a better opportunity will be afforded to study both the scientific and technical presentations.

I understand that the Shoreham is practically booked to capacity, but the Sheraton-Park, just one block away, still has accommodations. This has recently been remodeled and is one of Washington's superior hotels. Members who have not already done so are urged to secure reservations at once.

Looking forward to seeing a great many of you on this memorable occasion, I am

Sincerely,

*Vincent W. Archer*



*First*  
INTERSTATE  
SCIENTIFIC  
ASSEMBLY



SHOREHAM HOTEL

WASHINGTON, D. C., NOV. 1-2-3, 1954

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

THE MEDICAL SOCIETY OF VIRGINIA



# First Interstate Scientific Assembly

## Scientific Program

ALL SESSIONS AT THE SHOREHAM HOTEL

### MONDAY, NOVEMBER 1—Morning Sessions

#### TERRACE BANQUET ROOM

PRESTON A. McLENDON, M.D., Presiding  
President, The Medical Society of the  
District of Columbia

9:00- 9:30 ADDRESSES OF WELCOME

9:30-11:00 SYMPOSIUM ON JUVENILE  
DELINQUENCY

ADDISON M. DUVAL, M.D., Moderator  
Assistant Superintendent, St. Elizabeths  
Hospital, Clinical Professor of Psychia-  
try, George Washington University  
School of Medicine, Washington, D. C.

9:30- 9:50 BIRTH THROUGH FIVE YEARS

LEO KANNER, M.D.  
Associate Professor of Psychiatry and  
and Pediatrics, Johns Hopkins Univer-  
sity School of Medicine, Baltimore, Md.

9:50-10:10 FIVE YEARS TO ADOLESCENCE

FRANK J. CURRAN, M.D.  
Director, Children's Service Center of  
Charlottesville and Albemarle County,  
Inc., Charlottesville, Va.

10:10-10:30 ADOLESCENCE

FRITZ REDL, Ph.D.  
Chief, Child Research, Children's Serv-  
ice, National Institute of Mental Health,  
The Clinical Center, Bethesda, Md.

10:30-10:50 DISCUSSION PERIOD

#### WEST BALLROOM

VINCENT W. ARCHER, M.D., Presiding  
President, The Medical Society of Vir-  
ginia

9:00- 9:30 ADDRESSES OF WELCOME

9:30-12:00 A CRITICAL APPRAISAL OF CER-  
TAIN CURRENT MEDICAL THERA-  
PIES

9:30- 9:50 VITAMINS, HEMATINICS AND  
TRANSFUSIONS

CHARLES M. CARAVATI, M.D.  
Associate Professor of Clinical Medi-  
cine, Medical College of Virginia, Rich-  
mond, Va.

9:50-10:10 USES AND ABUSES OF HORMONE  
THERAPY

WILLIAM PARSON, M.D.  
Professor and Head of Department of  
Internal Medicine, University of Vir-  
ginia School of Medicine, Charlottes-  
ville, Va.

10:10-10:30 ANTIBIOTIC THERAPY

COUNT DILLON GIBSON, JR., M.D.  
Assistant Professor of Medicine, Med-  
ical College of Virginia, Richmond, Va.

10:30-11:00 INTERMISSION TO VISIT EXHIBITS



Capitol At Night



10:50-11:20	INTERMISSION TO VISIT EXHIBITS	11:00-11:20	LENTE INSULIN IN THE TREATMENT OF DIABETES
11:20-11:40	PEDIATRIC ALLERGY		ALEXANDER MARBLE, M.D.
	SUSAN COONS DEES, M.D.		Clinical Associate in Medicine, Harvard Medical School; Physician, Joslin Clinic and New England Deaconess Hospital, Boston, Mass.
	Associate Professor of Pediatrics and Allergy, Duke University School of Medicine, Durham, N. C.		
11:40-12:00	THE HANDICAPPED CHILD	11:20-11:40	RADIOISOTOPES IN HEART DISEASE AND CANCER
	G. G. DEEVER, M.D.		B. J. DUFFY, JR., M.D.
	Professor of Physical Medicine and Rehabilitation, New York University College of Medicine; Medical Director of Children's Service, Institute of Physical Medicine and Rehabilitation, New York, N. Y.		Instructor in Medicine and Director of the Isotope Laboratory, Georgetown University School of Medicine, Washington, D. C.
12:00- 2:00	RECESS FOR LUNCHEON	11:40-12:00	DISCUSSION PERIOD
		12:00- 2:00	RECESS FOR LUNCHEON

### MONDAY, NOVEMBER 1—Afternoon Sessions

#### TERRACE BANQUET ROOM

DAVID S. GARNER, M.D., Presiding

First Vice President, The Medical Society of Virginia

#### 2:00- 2:20 CURRENT MEDICAL LEGISLATION

FRANK E. WILSON, M.D.

Director, Washington Office, American Medical Association, Washington, D. C.

#### 2:20- 2:40 UNION WELFARE FUNDS AND THE DOCTORS

WILLIAM A. SAWYER, M.D.

Chairman, A.M.A. Committee on Medical Care for Industrial Workers, Medical Consultant to the International Association of Machinists, Rochester, N.Y.

#### 2:40- 3:00 QUESTION AND ANSWER PERIOD

#### 3:00- 3:30 INTERMISSION TO VISIT EXHIBITS

#### 3:30- 4:30 PANEL DISCUSSION ON MEDICAL EXPENSE PLANS

DONALD STUBBS, M.D., Moderator

President, Medical Service of the District of Columbia, Washington, D. C.

#### WEST BALLROOM

PAUL R. WILNER, M.D., Presiding

First Vice President, The Medical Society of the District of Columbia

#### 2:00- 4:30 A CRITICAL APPRAISAL OF CERTAIN CURRENT SURGICAL THERAPIES

#### 2:00- 2:15 TONSILLECTOMIES

VICTOR R. ALFARO, M.D.

Professor of Otolaryngology, Georgetown University School of Medicine, Washington, D. C.

#### 2:15- 2:30 BREAST CYSTS

ERNEST A. GOULD, M.D.

Instructor in Surgery, George Washington University School of Medicine; Attending Surgeon, Garfield Memorial Hospital, Washington, D. C.

#### 2:30- 2:45 EXTRACTION OF TEETH

DANIEL F. LYNCH, D.D.S., Washington, D. C.

President, American Dental Association.

#### 2:45- 3:00 STERILIZATION

JOHN E. SAVAGE, M.D.

Assistant Professor of Obstetrics, University of Maryland School of Medicine, Baltimore, Md.

#### 3:00- 3:30 INTERMISSION TO VISIT EXHIBITS

FRANK E. SMITH

Director, Blue Shield Medical Care  
Plans, Chicago, Ill.

W. H. HORTON

Executive Director and Director of  
Medical Service, Inc., New Haven,  
Conn.

JAMES ANDREWS, JR.

Director of Health Insurance, Life In-  
surance Association of America, New  
York, N. Y.

QUESTION AND ANSWER PERIOD

3:30- 3:50 THE INDICATIONS FOR ADRENAL-  
ECTOMY

H. A. ZINTEL, M.D.

Associate Professor of Surgery, Univer-  
sity of Pennsylvania School of Medicine  
and Graduate School of Medicine, Phil-  
adelphia, Penna.

3:50- 4:30 ROUND TABLE DISCUSSION ON  
ABOVE SUBJECTS

JOHN WYATT DAVIS, M.D.

Lynchburg, Va.

CARSON LEE FIFER, M.D.

Chief of Surgery, Alexandria Hospital  
and Circle Terrace Hospital, Alexan-  
dria, Va.

TUESDAY, NOVEMBER 2—Morning Sessions

TERRACE BANQUET ROOM

A. TYREE FINCH, M.D., Presiding

Third Vice President, The Medical So-  
ciety of Virginia

9:00- 9:10 GERIATRIC GYNECOLOGY

NEWLIN F. PAXSON, M.D.

Professor and Head, Division of Wom-  
en, Hahnemann Medical College and  
Hospital, Philadelphia, Pa.

9:10- 9:20 BACKACHE AND DYSMENORRHEA

ROBERT N. CREADICK, M.D.

Associate Professor of Obstetrics and  
Gynecology, Duke University School of  
Medicine, Durham, N. C.

9:20-10:00 PANEL DISCUSSION ON ABOVE  
SUBJECTS

W. R. PAYNE, M.D.

Chief Attending Obstetrician and Gyne-  
cologist, Riverside and East Buxton  
Hospital, Newport News, Va.

ROBERT H. BARTER, M.D.

Associate Professor of Obstetrics and  
Gynecology, George Washington Uni-  
versity School of Medicine, Washing-  
ton, D. C.

10:00-10:30 INTERMISSION TO VISIT EXHIBITS

10:30-10:40 INDUCTION OF LABOR

C. HAMPTON MAUZY, M.D.

Associate Professor of Obstetrics and  
Gynecology, Bowman Gray School of  
Medicine of Wake Forest College, Win-  
ston Salem, N. C.

WEST BALLROOM

MARGARET M. NICHOLSON, M.D., Presiding

Second Vice President, The Medical  
Society of the District of Columbia

9:00- 9:20 THE PRESENT STATUS OF ANTI-  
HYPERTENSIVE DRUGS

EDWARD D. FREIS, M.D.

Assistant Chief of Medicine, Mount  
Alto, Veterans Administration (Mount  
Alto Hospital) Washington, D. C.

9:20- 9:40 THE PRESENT MANAGEMENT OF  
ARTHRITIS

CHARLES RAGAN, M.D.

Associate Professor of Medicine, Col-  
lege of Physicians and Surgeons, Co-  
lumbia University, New York, N. Y.

9:40-10:00 THE USE OF THE NEWER ANTIBIO-  
TICS

MONROE J. ROMANSKY, M.D.

Associate Professor of Medicine, George  
Washington University School of Med-  
icine; Chief, George Washington Uni-  
versity Division, District of Columbia  
General Hospital, Washington, D. C.

10:40-10:50 THE RELATIONSHIP OF ESSEN-  
TIAL HYPERTENSION TO PREG-  
NANCY

ROBERT LANDESMAN, M.D.

Department of Obstetrics and Gynecology,  
New York Lying-In Hospital,  
New York, N. Y.

10:00-10:30 INTERMISSION TO VISIT EXHIBITS

10:30-10:50 THE SIGNIFICANCE OF NODULAR  
GOITER

JOHN C. McCLINTOCK, M.D.

Assistant Professor of Surgery, Albany  
Medical College, Albany, N. Y.

10:50-11:30 PANEL DISCUSSION ON ABOVE  
SUBJECTS

W. N. THORNTON, JR., M.D.

Professor of Obstetrics and Gynecology,  
University of Virginia School of Medicine,  
Charlottesville, Va.

FRANK A. FINNERTY, JR., M.D.

Chief Cardiovascular Research, Georgetown  
Division, District of Columbia  
General Hospital, Washington, D. C.

11:30-12:00 PRESENTATION OF AWARDS

The Medical Society of the District of  
Columbia

Certificate of Meritorious Service  
John Benjamin Nichols Award  
Scientific Exhibit Awards

The Medical Society of Virginia  
50-Year Club Awards

Installation of Carrington Williams, Sr.,  
M.D. as President of The Medical Society  
of Virginia



Home of The Medical Society of Virginia

12:00- 2:00 RECESS FOR LUNCHEON

10:50-11:10 THE MEDICAL TREATMENT OF  
THYROID DISEASES

E. C. BARTELS, M.D.

Internist, Lahey Clinic, Boston, Mass.

11:10-11:30 DISCUSSION PERIOD

11:30-12:00 PRESENTATION OF AWARDS IN  
TERRACE BANQUET ROOM



**TUESDAY, NOVEMBER 2—Afternoon Sessions**

**TERRACE BANQUET ROOM**

**2:00- 2:30 THE DAVIDSON LECTURE — THE PHYSIOLOGY OF ARTERIOVENOUS FISTULAS**

GEORGE E. SCHREINER, M.D.

Director of the Renal Service, Georgetown, University School of Medicine, Washington, D. C.

Established May 1, 1929 as an enduring expression of the gratitude of The Medical Society of the District of Columbia to EDWARD YOUNG DAVIDSON, M.D. who, when President of the Society in 1916, conceived and led to completion the erection of its building at 1718 M Street, N.W., Washington, D. C.

FRANK E. TAPPAN, M.D., Presiding

Second Vice President, The Medical Society of Virginia

**2:30- 2:50 A CRITICAL EVALUATION OF CLINICAL LABORATORY TESTS**

L. A. RAPEE, M.D.

Attending Physician, Garfield Memorial Hospital, Washington, D. C.

**2:50- 3:10 CYTOLOGY AS A PRACTICAL DIAGNOSTIC AID**

GRACE H. GUIN, M.D.

Associate Pathologist, Children's and Garfield Memorial Hospital, Washington, D. C.

**3:10- 3:30 INDICATIONS FOR AND INTERPRETATIONS OF BIOPSIES**

ARTHUR PURDY STOUT, M.D.

Professor of Surgery Emeritus, College of Physicians and Surgeons Columbia University, New York, N. Y.

**3:30- 4:30 CLINICAL PATHOLOGICAL CONFERENCE**

THOMAS M. PEERY, M.D., Moderator

Professor of Pathology, George Washington University School of Medicine, Washington, D. C.

GEORGE T. HARRELL, M.D.

Dean, College of Medicine, University of Florida, Gainesville, Fla.

**WEST BALLROOM**

JAMES W. LOVE, M.D., Presiding

Co-Chairman, Committee on Arrangements, First Interstate Scientific Assembly, Alexandria, Va.

**2:30- 2:50 THE TREATMENT OF URINARY TRACT INFECTIONS**

CHARLES A. W. UHLE, M.D.

Professor of Urology, University of Pennsylvania School of Medicine, Philadelphia, Pa.

**2:50- 3:10 THE TREATMENT OF ENLARGED PROSTATES**

SAMUEL A. VEST, M.D.

Professor of Urology, University of Virginia School of Medicine, Charlottesville, Va.

**3:10- 3:30 THE SIGNIFICANCE OF HEMATURIA**

AUSTIN I. DODSON, M.D.

Professor of Urology, Medical College of Virginia, Richmond, Va.



District of Columbia Medical Society Building

## WEDNESDAY, NOVEMBER 3—Morning Session

## TERRACE BANQUET ROOM

RALPH M. CAULK, M.D., Presiding  
Chairman, Committee on Arrangements,  
First Interstate Scientific Assembly,  
Washington, D. C.

## 9:00- 9:20 CANCER DETECTION: THEORETICAL AND PRACTICAL DIVIDENDS

CHARLES S. CAMERON, M.D.  
Medical and Scientific Director and  
Vice President, American Cancer Society, Inc., New York, N. Y.

## 9:20- 9:40 CANCER DETECTION IN RURAL GENERAL PRACTICE

D. J. MILLER, JR., M.D.  
Morgantown, Ky.

## 9:40-10:00 THE INDICATIONS FOR THE USE OF SUPERVOLTAGE IRRADIATION

RALPH PHILLIPS, M.D.  
Associate Radiotherapist Memorial  
Center for Cancer and Allied Diseases,  
New York, N. Y.

## 10:00-10:20 CANCER CHEMOTHERAPY

J. BATEMAN, M.D.  
Associate Oncologist, Garfield Memorial Hospital, George Washington University Cancer Clinic, Washington, D.C.

## 10:20-11:10 DISCUSSION PERIOD

## 11:10-11:30 INTERMISSION TO VISIT EXHIBITS

## 11:30-12:00 THE COUNTY SOCIETY, ITS RESPONSIBILITIES AND DUTIES

WALTER B. MARTIN, M.D., Norfolk, Va.  
President, American Medical Association

## 12:00- 2:00 RECESS FOR LUNCHEON

## WEDNESDAY, NOVEMBER 3—Afternoon Session

## TERRACE BANQUET ROOM

T. WINSHIP, M.D., Presiding  
Chairman, Program Committee, First  
Interstate Scientific Assembly, Washington, D. C.

## 2:00- 2:20 PREVENTIVE MEDICINE

HUGH H. HUSSEY, M.D.  
Professor and Head of the Department  
of Preventive Medicine and Public  
Health, Georgetown University School  
of Medicine, Washington, D. C.

## 2:20- 2:40 THE SURGEON'S ROLE IN THE PUBLIC HEALTH PROGRAM

OWEN H. WANGENSTEEN, M.D.  
Professor of Surgery, University of  
Minnesota Medical School, Minneapolis,  
Minn.

## 2:40- 3:00 PREVENTIVE GYNECOLOGY

D. ANTHONY D'ESOP, M.D.  
Professor of Clinical Obstetrics, and  
Gynecology, College of Physicians and  
Surgeons Columbia University, New  
York, N. Y.

## 3:00- 3:30 INTERMISSION TO VISIT EXHIBITS

## 3:30- 4:30 PANEL DISCUSSION: WHAT TO TELL THE CANCER PATIENT

C. T. KLOPP, M.D., Moderator  
Clinical Professor of Surgery, George  
Washington University School of Medicine,  
Washington, D. C.

## ALEC HORWITZ, M.D.

Associate Professor of Surgery, George  
Washington University School of Medicine,  
Washington, D. C.

THE REVEREND EDMUND J. LEE, D.D.  
Shepherdstown, West Virginia

THE VERY REVEREND  
FRANCIS B. SAYRE, JR.  
Dean of Washington Cathedral,  
Washington, D. C.

ARTHUR M. SUTHERLAND, M.D.  
Chief, Department of Rehabilitation and  
Psychiatry, Memorial Center for Cancer  
and Allied Diseases, New York,  
N. Y.

OWEN H. WANGENSTEEN, M.D.  
Professor of Surgery, University of  
Minnesota Medical School, Minneapolis,  
Minn.

H. MASON WELCH, LL.B., M.P.L.  
Malpractice Defense Trial Counsel,  
Washington, D. C.

# The Scientific Exhibit

## SHOREHAM HOTEL

### WEST LOBBY

#### Space 1

#### TREPONEMAL IMMOBILIZATION STUDIES

Comdr. V. E. Martens, (MC) USN and Lt. (j.g.)  
R. K. Ledbetter, (NSC) USN, Naval Medical School,  
National Medical Center, Bethesda, Md.

#### Space 2

#### THE INTERNAL ARCHITECTURE OF THE FEMUR FROM THE CLINICAL STANDPOINT

William J. Tobin, M.D. and Marvin M. Gibson, M.D.,  
Georgetown University School of Medicine, Smith-  
sonian Institution, and Armed Forces Institute of  
Pathology, Washington, D. C.

#### Space 3

#### EXTENDED RESECTION FOR CANCER—DISTAL COLON AND RECTUM

Garnet W. Ault, M.D., Robert S. Smith, M.D. and  
Alejandro E. Castro, M.D., Proctology Clinic of  
Washington, D. C.

#### Space 4

#### DISEASES OF THE THYROID GLAND

Gordon R. Hemmigar, M.D., Saul Kay, M.D. and Francis  
Gyorkey, M.D., Department of Pathology, Medical  
College of Virginia, Richmond, Va.

#### Space 5

#### SAFE, PROLONGED MUSCLE RELAXATION IN ORTHOPEDICS

Eugene G. Lipow, M.D., Washington, D. C.

#### Space 6

#### RADICAL TREATMENT OF PARAPLEGIC PRESSURE SORES

J. Treacy O'Hanlan, M.D., Waynesboro, Va.

#### Space 7

#### PROBLEMS IN LEGAL MEDICINE

Geoffrey T. Mann, M.D., LL.B., Richmond, Va.

#### Space 8

#### CORONARY DISEASE IN YOUNG AMERICAN MALES

Major William F. Enos, (MC) USA and Captain  
James C. Beyer, (MC) USA, Armed Forces Insti-  
tute of Pathology, Washington, D. C.

#### Space 9

#### PERIPHERAL VASCULAR DISEASES, ARTERIAL, VENOUS AND LYMPHATIC

Eugene Lowenberg, M.D., Norfolk, Va.

#### Space 10

#### DISEASES OF THE EAR DRUM

Irvin Hantman, M.D., Washington, D. C.

## WEST BALLROOM FOYER

#### Space 11

#### BREATH SOUNDS ON TAPE

Robert J. Anderson, M.D., and Armand E. Brodeur,  
M.D., U.S.P.H.S.; William B. Walsh, M.D., George-  
town University School of Medicine; Robert Gruver,  
M.D. and Fahrhan Bakir, M.D., District of Columbia  
General Hospital, Washington, D. C.

#### Space 12

#### ALCOHOLISM

Washington Committee for Education on Alcoholism,  
Washington, D. C.

#### Space 13

#### A DYNAMIC BRACHIAL PLEXUS; ANATOMY AND MOTOR FUNCTION

Colonel H. B. Luscombe, (MC) USA, and Captain Joel  
L. Roth, (MC) USA, Walter Reed Army Medical  
Center, Washington, D. C.

## TERRACE BANQUET ROOM FOYER

#### Space 14

#### ETIOLOGY OF MALPRACTICE

Bureau of Exhibits, American Medical Association, Chi-  
cago, Ill.

#### Space 15

#### ABRASIVE SURGERY

Murry M. Robinson, M.D., Washington, D. C.

#### Space 16

#### CONGENITAL ANOMALIES OF THE GASTRO-INTESTINAL TRACT

William B. Hoover, M.D. and William B. Wiley, M.D.,  
Norfolk, Va.

#### Space 17

#### CONTROL OF HOUSE DUST ALLERGENS

Eloise W. Kailin, M.D., Washington, D. C.

#### Space 18

#### RECENT ADVANCES IN THE TREATMENT OF INTESTINAL OBSTRUCTION

John Devine, Jr., M.D., Lynchburg, Va.

#### Space 19

#### HYDROCORTISONE TOPICAL OINTMENT IN DERMATOLOGY

James Q. Gant, Jr., M.D., Washington, D. C.

#### Space 20

#### INFECTIONS OF THE HAND

Philip O. Caulfield, M.D. and Howard S. Madigan,  
M.D., Washington, D. C.

#### Space 21

#### A DYNAMIC LUMBOSACRAL PLEXUS; ANATOMY AND MOTOR FUNCTION

Lt. Col. John H. Kuitert, (MC) USAF, Brooke Army



Medical Center, Fort Sam Houston, Texas; Lt. Col. Joseph W. Thomas, (MC) USA, and Captain Frederick E. Vultee, (MC) USA, Walter Reed Army Medical Center, Washington, D. C.

Space 22

HOMOZYGOUS HEMOGLOBIN C: A NEW HEREDITARY HEMOLYTIC SYNDROME

Charles E. Rath, M.D. and Douglas W. Terry, M.D.,  
Georgetown University Hospital, Washington, D. C.

Space 23

THE SYMPTOMS OF DIABETES MELLITUS

James M. Moss, M.D., Alexandria, Virginia

Space 24

HYSTEROALPINGOGRAPHY: DIAGNOSTIC AID

J. B. Sheffery, M.D. and D. Kushner, M.D., Washington, D. C.

Space 25

EXTERNAL, ANTERIOR SEGMENT AND FUNDUS DISEASES OF THE EYE

Richard W. Wilkinson, M.D., Department of Ophthalmology, George Washington University, Washington, D. C.

Space 26

GETTING COUNTRY DOCTORS

Edgar J. Fisher, Jr., Virginia Council on Health and Medical Care, Richmond, Va.

Space 27

PERIARTHRITIS CALCAREA

Bela Gondos, M.D., Washington, D. C.

Space 28

CLINICAL VALUE OF THE ELECTROENCEPHALOGRAM

J. P. Murphy, M.D., and Elizabeth Braum, Technician, Washington, D. C.



Main Lobby—Shoreham Hotel

Space 29

CONCOMITANT DISEASE OF SKIN AND BONE

The Department of Dermatology, Medical College of Virginia; Carl S. Lingamfelter, M.D. and Allen Peple, M.D., Richmond, Va.

Space 30

THE PHYSICIAN'S RESPONSIBILITY IN THE PREVENTION OF TRAFFIC ACCIDENTS

Cary N. Moon, Jr., M.D., Fletcher D. Woodward, M.D., and E. C. Corey, M.D., University of Virginia Hospital, Charlottesville, Va.

Space 31

HERPANGINA AND INFECTIOUS GINGIVOSTOMATITIS

Robert H. Parrott, M.D., National Microbiological Institute, National Institutes of Health, Bethesda, Maryland; Research Foundation of Children's Hospital of the District of Columbia

Space 32

THORACIC SURGICAL EMERGENCIES IN THE NEWBORN

Alvin C. Wyman, M.D., Marshall C. Sanford, M.D., and George Maksim, M.D., Children's Hospital of the District of Columbia

Space 33

STAPHYLOCOCCAL ENTERITIS FOLLOWING USE OF BROAD SPECTRUM ANTIBIOTICS

Sydney M. Ross, M.D., Frederic G. Burke, M.D., and E. Clarence Rice, M.D., Children's Hospital of the District of Columbia

Space 34

ADVANCES IN THE TREATMENT OF LEUKEMIA IN CHILDREN

E. Clarence Rice, M.D., Charles B. Preacher, M.D. and Grace H. Guin, M.D., Children's Hospital of the District of Columbia

Space 35

A STUDY OF ACCIDENTAL POISONINGS IN CHILDREN AND THE OPERATION OF A CENTER FOR THE CONTROL OF SUCH POISONINGS

Allen B. Coleman, M.D., Children's Hospital of the District of Columbia

Space 36

SOLITARY MASSES IN THE NECK OF ADULTS

G. H. Klinck, M.D., Armed Forces Institute of Pathology, C. T. Klopp, M.D., George Washington University Hospital, and T. Winship, M.D., Garfield Memorial Hospital, Washington, D. C.

Space 37

ESOPHAGEAL RECONSTRUCTION BY ESOPHAGOJEJUNOSTOMY AND ESOPHAGOCOLOGASTROSTOMY

Lewis H. Bosher, Jr., M.D. and Alfred M. Decker, Jr., M.D., Medical College of Virginia Hospital, Richmond, Va.

Space 38

LATE EFFECTS — INTERNALLY DEPOSITED RADIOACTIVE MATERIAL

Lt W. B. Looney and Lt. USN (j.g.) Martin Colodzin USN, Naval Hospital, National Naval Medical Center, Bethesda, Maryland

Space 39

EVALUATING THE PATIENT'S ABILITIES

A. B. C. Knudson, M.D., Joseph van Schoick and Thomas J. Zwierlein, Veterans Administration, Washington, D. C.

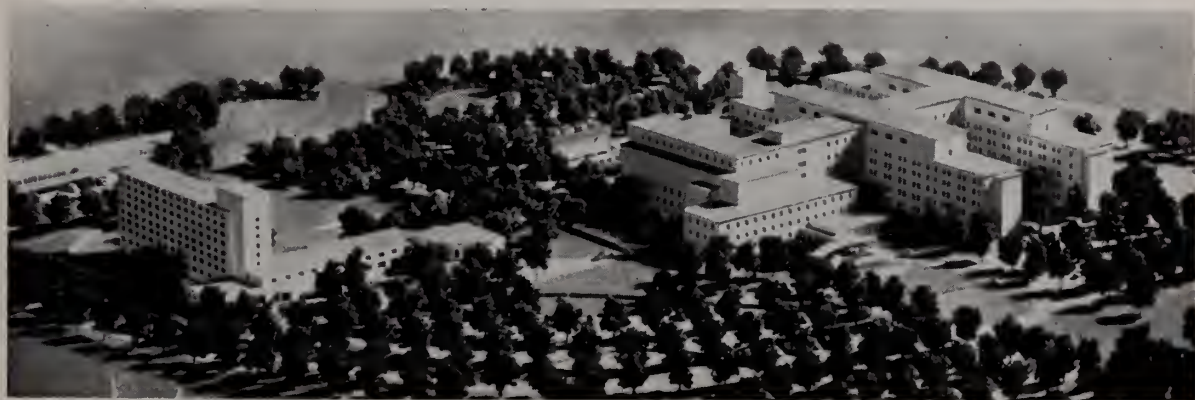
WEST LOBBY

BY SPECIAL INVITATION

Space 40

THE STORY OF GALLSTONES

Paul L. Shallenberger, M.D., Donald M. Clough, M.D. and Henry M. Perry, M.D., Guthrie Clinic, Sayre, Pa.



Proposed Lay-out of Hospital Center, Washington, Comprised of Episcopal Eye, Ear and Throat, Emergency and Garfield Hospitals.

# Medical Motion Pictures

SHOREHAM HOTEL  
FOYER TO MAIN BALLROOM  
MONDAY, NOVEMBER 1

Time	Titles	Sponsors
9:00	INTRA-ARTICULAR INJECTIONS OF HYDROCORTISONE	William B. Rawls, M. D., New York, N. Y.
9:30	REPRODUCTION OF THE RAT	R. J. Blandau, M.D. and Anthony Conedo, M.D., University of Washington School of Medicine, Seattle, Wash.
9:50	INTRAVENOUS ANESTHESIA WITH BARBITURATES	Mary Karp, M.D., W. O. McQuiston, M.D. and J. E. Remlinger, M.D., Chicago, Ill.
10:30	EFFECT OF RESERPINE ON MONKEYS	Alfred E. A. Earl, M.D., Summit, N. J.
10:45	OVARIAN TUMORS	Herbert E. Schmitz, M.D., Chicago, Ill.
11:45	NEPHROSIS IN CHILDREN	R. E. Cooke, M.D., Yale University School of Medicine, New Haven, Conn. and Leo L. Leveridge, M.D., New York, N. Y.
11:40	EXAMINING THE WELL CHILD	Oklahoma State Department of Health, Oklahoma, City, Okla.
2:00	BCG . . . VACCINATION AGAINST TUBERCULOSIS	The National Tuberculosis Association, Chicago, Ill. and Research Foundation, American Trudeau Society, New York, N. Y.
2:20	VIRAL HEPATITIS	Army Medical Service, Washington, D. C.
2:40	PRINCIPLES OF FRACTURE REDUCTION	Veterans Administration, Washington, D. C.
3:15	PHEOCHROMOCYTOMA	Keith S. Grimson, M.D., Duke University School of Medicine, Durham, North Carolina
3:40	THE SURGICAL TREATMENT OF MENTAL STENOSIS	Bailey Thoracic Clinic, Philadelphia, Pa.
4:00	ENCORE HOUR	

A limited number of films will be reshowed as determined by the greatest number of requests.

## TUESDAY, NOVEMBER 2

Motion pictures produced by the members of the Medical Society of the District of Columbia and The Medical Society of Virginia. All authors will be present during the presentation of their films. Time will be allowed for comment and discussion.

Time	Titles	Sponsors
9:00	ORCHIOPEXY, MODIFIED TOREK TECHNIQUE	Lloyd G. Lewis, M.D., Washington, D. C.
9:20	URETEROSIGMOIDOSTOMY, A SIMPLIFIED TECHNIQUE	W. C. Stirling, M.D. and Charles H. Ligon, M.D., Washington, D. C.
9:45	TRANSORBITAL LOBOTOMY, PART III, ANXIETY	Walter Freeman, M.D., Los Altos, Calif.
10:15	PLASTIC RECONSTRUCTION OF AGENESIS OF THE VAGINA	Alfred J. Suraci, M.D., Washington, D. C.
10:40	DIRECT INTRACARDIAC SURGERY WITH GENERAL HYPOTHERMIA	Edgar W. Davis, M.D., Charles E. Fierst, M.D., John O. Nestor, M.D., and Bernard J. Walsh, M.D., Washington, D. C.
11:00	INTRAMEDULLARY NAIL FOR FRACTURE OF FEMUR	Virgil R. May, Jr., M.D., Richmond, Va.
11:20	SPINAL FUSION	William M. Deyerle, M.D., Richmond, Va.
12:00	RECESS FOR LUNCHEON	

2:00-4:00 SPECIAL SHOWING OF NEWEST MEDICAL FILMS RELEASED TOO LATE FOR LISTING IN MONTHLY.

WEDNESDAY, NOVEMBER 3, 1954  
MONDAY PROGRAM WILL BE REPEATED



### AAGP PARTICIPATION

Both the District of Columbia and Virginia Chapters of the American Academy of General Practice have notified their members that the First Interstate Scientific Assembly has the official sanction of the Commission on Education of the American Academy of General Practice for formal postgraduate credit to Academy members who attend this meeting.

In view of the active interest in the Assembly of officers of both the chapters it is expected that there will be a large attendance by general practitioners.

### ALUMNI DINNERS AND LUNCHEONS

The time and place of all alumni dinners and luncheons are to be found listed in the Assembly Calendar on pages 449-50. Tickets for these events will be available either through the officers of the sponsoring groups or in the Registration Section.

### ANNUAL DINNER

The program planned for this year's Annual Dinner is different. There will be no speeches. In their place will be a variety show "Skitsophrenia"—A Medical Melange, featuring an all doctor-and-wife cast. There will be skits, stunts and music, presented by exceptional talent. Come and enjoy yourself. You will be surprised and pleased.

See REGISTRATION for details about ticket sales.

### DINNER FOR DOCTORS' OFFICE STAFFS

One of the most successful events of last year's Assembly was the dinner for doctors' staffs (nurses, secretaries, technicians, receptionists, etc.) It was, therefore, decided by the Committee on Arrangements to make this an annual affair.

This year's dinner is sponsored jointly by the Medical Societies of the District of Columbia and Virginia.

Leo E. Brown, Director of Public Relations, American Medical Association, will be the speaker, his subject: "You Can be a Star on Medicine's PR Team." Entertainment will be furnished by doctors and their wives from the District of Columbia and Virginia, among whom there is exceptional talent.

As in previous years, physicians will be asked to purchase tickets for the dinner for their office staffs. Tickets will be \$5.00 each, the actual cost of the dinner. Tables will be filled as applications are received, **INDIVIDUALS OR GROUPS WISHING TO SIT AT THE SAME TABLE SHOULD SEND IN THEIR REQUESTS TOGETHER.** Changes cannot be made after seating has been arranged.

Tickets will be mailed on receipt of application and check at the offices of the Medical Society of the District of Columbia, 1718 M Street, N. W., Washington, D. C.



Sheraton-Park Hotel

## REGISTRATION

As in previous years, arrangements have been made to register members of the Medical Society of the District of Columbia prior to the opening of the Assembly at the Society's executive offices on Thursday and Friday, October 28 and 29, from 9 a. m. to 5 p. m.

For several years the Society has sponsored a luncheon that in itself was an incentive to early registration. THIS YEAR THERE WILL BE NO LUNCHEON GIVEN BY THE MEDICAL SOCIETY FOR ITS MEMBERSHIP. However, members who find it convenient to do so will save time if they come to the Society's offices on the above dates and avoid being detained at the Registration Section at the Shoreham.

The Registration Section, which will be set up in the West Lobby of the Shoreham Hotel, will be open on Sunday from 2 to 5:00 p.m. and on Monday morning at 8 a.m. to permit everyone to register in time for the opening session.

The Registration Section will be divided into three departments; one for the registration of members of the Medical Society of the District of Columbia, Guest Physicians, Interns, Residents, Exhibitors, etc., and for the registration of The Medical Society of Virginia members; and a central section to be devoted to the sale of tickets for the Annual Dinner and various luncheons and dinners sponsored by the alumni and specialty groups.

The usual procedure will be followed by the District of Columbia for the Annual Dinner, formal invitations being extended to physicians and their guests. For the convenience of those desiring to reserve tables, floor

plans will be available at the Society's Executive Offices on the dates for pre-registration, October 28 and 29.

Representatives of The Medical Society of Virginia have decided that the Society's usual procedure shall be followed with regard to their Annual Dinner ticket sales. The tickets will be made available to the Virginia House of Delegates and other physicians who register on Sunday afternoon and all day Monday in the Registration Section.

Tickets for the Annual Dinner will be \$7.50 per person. The Dinner will be preceded by a cocktail party through the courtesy of Peoples Drug Stores.

## PARKING PRIVILEGES

Managers of the Shoreham Hotel and the Sheraton-Park Hotel have agreed to give the physicians attending the Assembly exclusive rights to both hotel garages and parking lots during the meeting.

Special parking rates at these hotels will be:

Garage—\$1.25 up to 24 hours

Parking Lot—50 cents up to 24 hours

Parking stickers will be sent to members of both Societies prior to the Assembly. Parking lot attendants have been instructed to honor the parking sticker, which should be pasted on the windshield. Physicians must display the sticker to be entitled to the parking privileges offered by both hotels.

REMEMBER NO CARS WILL BE ALLOWED IN THE HOTEL GARAGES OR PARKING LOTS WITHOUT A FIRST INTERSTATE SCIENTIFIC ASSEMBLY STICKER.



Architect's Design of the New Providence Hospital, Washington



# Assembly Calendar

All Meetings at the Shoreham Hotel Unless Otherwise Indicated

## SUNDAY, OCTOBER 31

- 9:30 a.m. Potomac and Virginia Chapters American College of Chest Physicians—Blue Room
- 1:00 p.m. Council Meeting of The Medical Society of Virginia—Suite 100 C
- 2:00 p.m.- 5:00 p.m. Registration—West Lobby
- 2:00 p.m.- 5:00 p.m. Woman's Auxiliary Registration—Lower Main Lobby
- 7:00 p.m. The Medical Society of Virginia House of Delegates—Dinner and Meeting—West Ballroom

## MONDAY, NOVEMBER 1

- 8:00 a.m. Registration—West Lobby
- 9:00 a.m.- 3:00 p.m. Woman's Auxiliary Registration—Lower Main Lobby
- 9:00 a.m.-Noon Scientific Program—Terrace Banquet Room and West Ballroom

- 9:00 a.m.-Noon Medical Motion Pictures—Foyer to Main Ballroom
- 10:00 a.m. Medical Society of Virginia Reference Committee—Suite 100 B
- 10:00 a.m.-11:00 a.m. Mead Johnson Coffee Hour—Lower Main Lobby
- 12:15 p.m. George Washington University Medical Society Luncheon—Blue Room
- 12:15 p.m. Virginia Pediatric Society Luncheon—Suite 100 C
- 12:15 p.m. Virginia Surgical Society Luncheon—Louis XVI Room
- 12:30 p.m. Virginia Neuropsychiatric Society Society Luncheon—Adams Hamilton Room of the Sheraton-Park Hotel
- 2:00 p.m.- 4:30 p.m. Scientific Program—Terrace Banquet Room and West Ballroom
- 2:00 p.m.- 5:00 p.m. Medical Motion Pictures—Foyer to Main Ballroom
- 2:30 p.m. Virginia Woman's Auxiliary Pre-convention Board Meeting—Suite 100 B



Aerial View of the Shoreham Hotel



4:30 p.m.	Annual Meeting of Membership Virginia Medical Service Association—Louis XVI Room.	1:00 p.m.	eon—Madison Suite of the Sheraton-Park Hotel
5:00 p.m.- 7:00 p.m.	Class of 1934, George Washington University Medical Alumni, 20th Anniversary Reception—(suite to be announced)	1:30 p.m.	Virginia Section of the American College of Physicians Luncheon—Louis XVI Room
5:00 p.m.- 7:00 p.m.	Women's Medical Society (suite to be announced)		Virginia and District of Columbia Woman's Medical Auxiliary Luncheon—Continental Room of the Sheraton-Park Hotel
6:30 p.m.	Medical College of Virginia Reception—West Ballroom	2:00 p.m.- 4:30 p.m.	Scientific Program—Terrace Banquet Room and West Ballroom
6:30 p.m.	Tulane Medical Alumni Reception and Dinner—Suite 100 C	2:00 p.m.- 4:00 p.m.	Medical Motion Pictures—Foyer to Main Ballroom
6:30 p.m.	University of Virginia Medical Alumni Reception — Burgundy Room of the Sheraton-Park Hotel	4:00 p.m.	The Medical Society of Virginia House of Delegates Meeting—Louis XVI Room
7:30 p.m.	Medical College of Virginia Dinner —Terrace Banquet Room	6:30 p.m.	Cocktail Party (Courtesy of Peoples Drug Stores) — Lower Main Lobby
7:30 p.m.	University of Virginia Medical Alumni Dinner—Continental Room of the Sheraton-Park Hotel	8:00 p.m.	Annual Banquet of The Medical Society of the District of Columbia and The Medical Society of Virginia—Blue Room and West Ballroom

## TUESDAY, NOVEMBER 2

8:00 a.m.	Virginia Diabetic Association Breakfast and Business Meeting—Suite 100 C
8:30 a.m.	Registration—West Lobby
9:00 a.m.-Noon	Woman's Auxiliary Registration—Lower Main Lobby
9:00 a.m.-Noon	Scientific Program—Terrace Banquet Room and West Ballroom
9:00 a.m.-Noon	Medical Motion Pictures—Foyer to Main Ballroom
9:00 a.m.	Virginia Society for Pathology and Laboratory Medicine—the Adams Hamilton Room of the Sheraton-Park Hotel
9:15 a.m.	Virginia Woman's Auxiliary Pre-convention General Annual Meeting—Louis XVI Room
12:15 p.m.	Georgetown University Medical Alumni Luncheon—Blue Room
12:15 p.m.	Washington Orthopedic Club and Virginia Orthopedic Society Luncheon and Business Meeting—Suite 100 C
12:15 p.m.	Virginia Radiological Society Luncheon—Suite 100 B
12:30 p.m.	District of Columbia and Virginia Chapters of American Academy of General Practice Luncheon—Caribar Room of the Sheraton-Park Hotel
12:30 p.m.	Virginia Obstetrical and Gynecological Society Luncheon—Franklin Room of the Sheraton-Park Hotel
12:30 p.m.	District of Columbia and Virginia Societies of Anesthesiologists Lunch-

9:30 p.m.

"Skitizophrenia"—A Medical Mèlange—Terrace Banquet Room.  
A fast moving variety show presented by an all doctor-wife cast. The District of Columbia and Virginia are represented by exceptional talent.

## WEDNESDAY, NOVEMBER 3

8:30 a.m.- 4:30 p.m.	Registration—West Lobby
8:30 a.m.	Virginia Woman's Auxiliary Past President's Breakfast—Suite 100 B
9:00 a.m.-Noon	Scientific Program—Terrace Banquet Room
9:00 a.m.—Noon	Medical Motion Pictures—Foyer to Main Ballroom
9:30 a.m.	Virginia Woman's Auxiliary Post-convention Meeting—Suite 100 C
12:15 p.m.	Virginia Urological Society Luncheon—Louis XVI Room
2:00 p.m.- 4:30 p.m.	Scientific Program—Terrace Banquet Room
2:00 p.m.- 4:30 p.m.	Medical Motion Pictures—Foyer to Main Ballroom
7:00 p.m.	Dinner for the District of Columbia and Virginia Doctors' Office Staffs (Assistants, Secretaries, Nurses and Receptionists)—Terrace Banquet Room
	Speaker: Leo E. Brown, Director, Department of Public Relations, American Medical Association
	Subject: "You Can be a Star on Medicine's PR Team"

# The Technical Exhibit

SHOREHAM HOTEL				
Main Ballroom, Foyer to Main Ballroom and Bird Cage Walk				
<i>Exhibitor</i>	<i>Booth No.</i>			
ABBOTT LABORATORIES	50	J. B. LIPPINCOTT COMPANY		9
A. S. ALOE COMPANY	15	P. LORILLARD COMPANY		38
AMES COMPANY, INC.	55	M & R LABORATORIES		44
ARCUM PHARMACEUTICAL CORPORATION	64	THE S. E. MASSENGILL COMPANY		76
AYERST LABORATORIES	75	MAXWELL & TENNYSON PHARMACISTS		71
BABY DEVELOPMENT CLINIC	29	MCKENNA SURGICAL SUPPLY, INC.		25
THE BAKER LABORATORIES, INC.	51	MEAD JOHNSON & COMPANY		69
BEECH-NUT PACKING COMPANY	42	MEDICAL SERVICE OF THE DISTRICT OF COLUMBIA and		
BENSON & HEDGES	18	VIRGINIA MEDICAL SERVICE ASSOCIATION		36
BETH-MONT SURGICAL SUPPLY CO.	62	THE MEREDYTH COMPANY		58
BEUCHLER'S	66	THE WILLIAM S. MERRELL COMPANY		30
BILHUBER-KNOILL CORP.	67	MILES REPRODUCER COMPANY, INC.		34
BORDEN'S Prescription Products Division	10	THE NATIONAL DRUG COMPANY		63
BRAYTEN PHARMACEUTICAL COMPANY	79	ORTHO PHARMACEUTICAL CORPORATION		83
BURROUGHS WELLCOME & CO. (U.S.A.) INC.	68	PARKE, DAVIS & COMPANY		70
BURTON, PARSONS AND COMPANY	14	THE E. L. PATCH COMPANY		78
S. H. CAMP and COMPANY	33	PEOPLES DRUG STORES, INC.		13
CARROLL DUNHAM SMITH PHARMACAL COMPANY	6	PET MILK COMPANY		53
CIBA PHARMACEUTICAL PRODUCTS, INC.	46	CHARLES PFIZER & COMPANY, INC.		26
THE COCA-COLA COMPANY	80	PHARMACISTS' SURGICAL SUPPLY CORP. Division of District Wholesale Drug		37
DAVIES, ROSE & COMPANY, LIMITED	86	POWERS & ANDERSON, INC.		87
THE DIETENE COMPANY	77	WM. P. POYTHRESS & CO., INC.		82
DOAK PHARMACAL CO., INC.	81	R. J. REYNOLDS TOBACCO COMPANY		60
DOHO CHEMICAL CORPORATION	3	A. H. ROBINS COMPANY, INC.		74
THE DOMINION LABORATORIES	59	J. B. ROERIG AND COMPANY		16
C. B. FLEET CO.	8	SANBORN COMPANY		65
E. FOUGERA AND COMPANY, INC.	54	SANDOZ PHARMACEUTICALS Division of Sandoz Chemical Works, Inc.		56
GENERAL ELECTRIC COMPANY, X-Ray Department	41	W. B. SAUNDERS COMPANY		45
THE GIBSON COMPANY	85	SCHERING CORPORATION		29
THE HARROWER LABORATORY, INC.	32	JULIUS SCHMID, INC.		35
CHARLES C. HASKELL & CO., INC.	47	G. D. SEARLE & CO.		61
HOFFMAN-LA ROCHE, INC.	84	SERVISS X-RAY COMPANY		49
HOLLAND-RANTOS COMPANY, INC.	31	SMITH, KLINE & FRENCH LABORATORIES		39
IVES-CAMERON COMPANY, INC.	57	THE STUART COMPANY		4
KELEKET X-RAY CORPORATION	88 and 89	SWIFT & COMPANY		43
KLOMAN INSTRUMENT CO., INC.	17 and 17A	U. S. VITAMIN CORPORATION		2
LEDERLE LABORATORIES DIVISION American Cyanamid Company	27	VANPELT & BROWN, INC.		40
THE LIEBEL-FLARSHEIM COMPANY	73	WALKER LABORATORIES, INC.		11
ELI LILLY AND COMPANY	12	WARNER-CHILCOTT LABORATORIES		72
		WHITE LABORATORIES, INC.		48
		THE WILLIAMS AND WILKINS COMPANY		52
		WINTHROP-STEARN'S INC.		5
		WYETH LABORATORIES		1
		ZIMMER MANUFACTURING COMPANY		7

# Committees

## COMMITTEE ON ARRANGEMENTS

Ralph M. Caulk, General Chairman (D. C.)  
James W. Love, Co-Chairman (Va.)  
Alfred A. J. Den, Vice Chairman (D. C.)  
John C. Watson, Vice Chairman (Va.)

## PROGRAM COMMITTEE

T. Winship, Chairman (D. C.)  
Benjamin W. Rawles, Co-Chairman (Va.)  
Henry D. Ecker (D. C.)  
Calvin T. Klopp (D. C.)  
Andrew A. Marchetti (D. C.)  
Edward W. Nicklas (D. C.)  
Carolyn H. S. Pincock (D. C.)  
A. A. Creecy (Va.)  
Ira L. Hancock, (Va.)

## COMMITTEE ON SCIENTIFIC EXHIBIT

Alfred A. J. Den, Chairman (D. C.)  
Marcel J. Foret (D. C.)  
William D. Dolan, Co-Chairman (Va.)  
Hunter B. Frischkorn (Va.)  
Alvin C. Wyman (Va.)

## COMMITTEE ON MEDICAL MOTION PICTURES

Joel B. Hoberman, Chairman (D. C.)  
Paul Elsberg (D. C.)  
Richard H. Fischer (D. C.)  
W. E. Baker, Co-Chairman (Va.)  
Claude E. Cooper (Va.)  
June Carol Shafer (Va.)

## COMMITTEE ON PUBLICITY

Josephine Renshaw, Chairman (D. C.)  
John C. Murphy (D. C.)  
J. Lawn Thompson (D. C.)  
Milton R. Stein, Co-Chairman (Va.)  
Harry C. Bates, Jr. (Va.)  
Jacob Derk Zylman (Va.)

## COMMITTEE ON SOCIAL EVENTS

Richard H. Todd, Chairman (D. C.)  
John C. Watson, Co-Chairman (Va.)  
Darrell C. Crain (D. C.)  
Harry S. Deuglas (D. C.)  
Robert H. Harmon (D. C.)  
Hugh O. House (D. C.)  
Zigmond M. Lebensohn (D. C.)  
Mary K. L. Sartwell (D. C.)  
Myer H. Stolar (D. C.)  
Earle B. Thompson (D. C.)  
Maurice Van Kinsbergen (D. C.)  
Charles Stanley White, Jr. (D. C.)  
Charles Amole (Va.)  
Allen M. Ferry (Va.)  
Colin MacRae (Va.)  
Stanley Wolf (advisory)  
Mrs. L. A. Rapee (ex-officio)

## FINANCE COMMITTEE

Robert U. Cooper, Chairman (D. C.)  
Louis J. Goffredi (D. C.)  
Jerome N. Baum, Co-Chairman (Va.)  
Kay H. Ostergard (Va.)

## ADMINISTRATIVE STAFF

Theodore Wiprud  
Administrator (D. C.)  
Madeline L. Hyndman  
Assistant to the Administrator  
(D. C. and Va.)  
A. Louise Eckburg  
Registration (D. C.)  
Robert I. Howard  
Secretary of All Committees (Va.)  
Lawrence A. Zupan  
Exhibit Manager (D. C.)  
E. Spencer Watkins  
Registration (Va.)



## BOOK ANNOUNCEMENTS

**Peripheral Circulation In Man.** By G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.Ch., and JESSIE S. FREEMAN, M.B., B.S., D.P.H. Assisted by Joan Etherington. Editors for the Ciba Foundation. A Ciba Foundation Symposium. Little, Brown and Company, Boston. 1954. xi-219 pages. With 72 illustrations. Price \$6.00.

This book represents the proceedings, in full, of the papers presented and of the ensuing discussions at an informal international symposium with strictly limited membership, sponsored by the Ciba Foundation. These proceedings make a very interesting reading for physicians, physiologists, pathologists and surgeons, not so much because of new material presented but because of the provocative remarks, daring questions and new problems uttered in the discussion. It is impossible in a review to give a detailed picture of all the problems discussed. However, a list of the titles and authors, of the more important papers, might convey a general impression. "A critical survey of methods available for the measurement of human peripheral blood flow," by A. C. Burton; "The venous occlusive technique for measurement of finger blood flow," by G. E. Burch; "The electrical strain gauge method for measurement of peripheral circulation in man," by R. J. Whitney; "Differential secretion of noradrenaline and adrenaline from the suprarenal gland," by U. S. Euler; "The effect of adrenaline and noradrenaline on the blood flow through the human skeletal muscle," by R. F. Whelan; "Changes in peripheral circulation with exposure to cold," by L. D. Carlson; "Blood flow response to temperature and other factors," by H. Barcroft; "Observations on the neuro-histology of cutaneous blood vessels," by G. Weddell and W. Pallie; "The problem of vasomotor denervation," by A. B. Hertzman; "Vascular reactivity following sympathectomy," by R. T. Grant; "Visceral activity and peripheral circulation in the spinal man," by L. Guttman; and "some aspects of functional disorders of the circulation," by P. Martin. An author index and an especially carefully prepared subject index increase the value of this book for the reader.

ERNST FISCHER, M.D.

**Children for the Childless.** A Concise Explanation of the Medical, Scientific, and Legal Facts about Conception, Fertility, Sterility, Heredity, and Adoption. Edited by MORRIS FISHBEIN, M.D. With Chapters by Sidonie Gruenberg, Morris Fish-

bein, M.D., Edward Weiss, M.D., I. C. Rubin, M.D., Nicholson J. Eastman, M.D., J. P. Greenhill, M.D., Fred B. Kyger, M.D., and Richard L. Jenkins, M.D., and Benjamin C. Gruenberg, Ph.D. Doubleday & Company, Inc., Garden City, New York. 1954. 223 pages. Cloth. Price \$2.95.

Children for The Childless, is an excellent selection of splendidly planned and written articles for the intelligent general public. Though geared specifically toward infertile couples who would want to understand the causes of their sterility and find out what means there are to solve their problem and which ones to choose, the book, in spite of its small size (211 pages), is so informative that it deserves being read by a wider audience. Among the number of these fine articles we should like to mention particularly Professor Nicholson Eastman's article, who succeeded in conveying the scientific material presented with literary perfection and dramatic impressiveness.

HERTHA RIESE, M.D.

✓ **Beyond the Germ Theory.** The Roles of Deprivation and Stress in Health and Disease. IAGO GALDSTON, M.D., Editor. A New York Academy of Medicine Book. Health Education Council, New York and Minneapolis. 1954. viii-182 pages. Price \$4.00.

This small book represents the papers given at the conference jointly sponsored by various tuberculosis and health organizations of Greater New York. The general theme propounded, in all the articles, is an extension and successful application of three basic concepts of the prevention and treatment of disease: Claude Bernard's "internal milieu", Walter Cannon's "homeostasis" and Hans Selye's "stress syndrome." The authors do not deny or belittle the germ theory of diseases. The title's aim is only to indicate the importance of factors other than germs for illness and poor health. The book is subdivided into four main chapters: the dynamics of deprivation and stress, nutritional deprivation and stress, psychological deprivation and stress, social stress and deprivation. Although the different authors vary a great deal in their style of writing and in organizing their material and thoughts, the book is interesting throughout and provides provocative ideas not only for readers interested in public health but also for the medical practitioners.

ERNST FISCHER, MD.

## MISCELLANEOUS

**When I Was Young, They Did It This Way—**

The following article was recently published in the Arlington County Medical Society Bulletin. It is written by Dr. W. C. Welburn and is one of his "masterpieces of reminiscence". It was felt members of the Society in other parts of the State might enjoy it also.

The Arlington County Medical Society at this time is in a somewhat anomalous position. We function as a component of the State Medical Society and therefore of the A.M.A., but might have difficulty in proving our legitimacy. Our birth certificate—our charter is still lost.

In 1914, Doctors H. C. Corbett, J. H. Walton, R. A. Quick, R. N. Sutton and W. C. Welburn applied for and were granted a charter for the new society.

Dr. Sutton admits that he was secretary at the time, so he received the charter in the name of J. H. Walton, president, and R. A. Quick, vice president.

Dr. Sutton should be required to produce the document. After only 40 years this should not prove too difficult.

If further reminiscences can be tolerated, I should like to go back to 1880 for my first recollection of medical procedures. The scene is indelibly stamped on my brain because of my terror of being vaccinated. Dr. Menees came to the house. No cleansing of the arm was done. He produced from a vest pocket a small instrument, opening like a pocket knife. The blade near the tip was provided with a semicircular scarifier. After my arm was cross-hatched he produced from another pocket a piece of newspaper from which he unwrapped a treasurer scab taken from some patient who had a good "take". This was thoroughly rubbed into the raw area on my arm. I got a good "take".

At the turn of the Century, surgical cleanliness was still a problem. Antisepsis seemed to be the only answer, rubber gloves being still many years in the future. A forerunner was the white cotton glove, autoclaved and fairly safe until it got wet.

William Rice Prior, a pupil of Marion Sims, worked out his own technique. Following a thorough scrubbing the hands were laved with powdered chloride of lime, moistened and activated with a lump of caustic soda. The hands were then soaked in a strong permanganate solution and finally the

stain removed by soaking in a saturated solution of oxalic acid. Any cuticle remaining was fairly sterile. His results were excellent.

Operating in the same clinic was a surgeon whom we will call R. H. M. Dawson. The interns supplied him with three other initials which they deemed more appropriate. This alphabetical bird conducted a class in surgery on the cadaver. When operating he always put his trust in cotton gloves and his results were horrible. He always blamed his infections on the interns.

At one side of the operating room was an ordinary kitchen sink with hot and cold faucets and a sign reading, "Cut off water when not in use." I had finished scrubbing on one occasion to assist him in an operation and used my foot to shut off the water. Old Alphabet came in just in time to witness this maneuver and proceeded to give me a verbal shellacing about it. "Now he would have to soil his hands by touching a faucet I had contaminated with my foot."

When he had finished I explained my unusual action. The preceding operation had been evacuation of a pus-sac, a quart or more of pus being spilled on the floor. The scrub women were called and had mopped up the mess, making several trips to the sink for fresh water. After scrubbing my hands I would not touch them to the faucet again. There was no further argument, but next day a plumber arrived with strap iron, coil springs, stove bolts etc., and in half a day had contrived a Rube Goldberg contraption whereby you stepped on a foot pedal and the water flowed.

Getting out into private practice, the home was still the place where babies were born. Forcep cases, breech presentations, versions, manual extractions and repair work were all done in the home.

The doctor made his preparations, started the anesthesia and completed the job without calling another doctor or a trained nurse. Plenty of boiling water was at hand, corrosive sublimate tablets were a penny a piece. Post-partum pathology was practically unknown.

A case at point. Beginning in private practice in Nashville, Tenn., I was called one day by a doctor who lived in the suburbs. When I arrived a Negro woman was in violent eclamptic seizure. We decided on immediate delivery for forceps and as I did not

yet own a pair the doctor went home for his.

When he returned he hitched his horse, unwrapped his forceps from a sheet of newspaper and assured me he had "dipped them in warm water before he left home."

He did not wash his hand but called for lard with which he annointed the blades and proceeded to apply them. The application was not very good and the blades slipped. He asked me to have a try. I felt sure she was infected beyond all hope, but I, at least, scrubbed up, used bichloride solution and made some effort toward local cleanliness. The dead baby was delivered and the mother never had a degree of fever.

### **Problem Drinker at Work.**

The "problem drinker" in industry can be cured best by keeping him on the job while helping him to solve his problem, according to an industrial physician.

Allowing the employee to keep working while he tries to stop drinking is like the successful treatment of World War II casualties at the front instead of at rear bases. It gives the worker, like the soldier, "the feeling of courage and pride that one gets by staying in the fight and not retreating." Dr. Thomas H. Hogshead, of the Medical Division of E. I. du Pont de Nemours & Co., Wilmington, Del., reported on the company's program in the June Archives of Industrial Hygiene and Occupational Medicine, published by the American Medical Association.

"Our program is successful," he said. "An estimated 65 per cent of the cases treated have been rehabilitated. The total cost of the program is estimated at less than \$100,000. The total gains cannot be measured." The worker's "need for security, for recognition, for position, as well as his desire to belong and to be led, are all met on the job." Such motivation is of paramount importance in the approach to the problem of alcoholism in industry."

The employee considered a problem drinker is advised he is being turned over to the medical division. At the end of three months the division recom-

mends either that he is trying and should be retained, or that he shows no interest in rehabilitation and should be discharged.

The company cooperates closely with Alcoholics Anonymous, and has a "companywide alert" to the problem and its treatment. "The fact that alcoholism or problem drinking is accepted as a disease by a company so scientific as du Pont and treated as any other illness by our medical division has opened the way for the rehabilitation of hundreds of employees."

### **Gangrene and Foot Amputation.**

An economical substance available in most doctors' offices can prevent gangrene and amputation of the feet in some cases, a Philadelphia physician, Dr. Meyer Naide, reported in the June 19th Journal of the American Medical Association. This has been a chief problem in patients with severe ischemia (blood deficiency) of the foot.

Of various substances tested the "most useful proved to be the old preparation, compound tincture of benzoin." This solution is most commonly used for steam inhalations in bronchitis. It is available in all hospitals and almost all offices and is simple to apply. It dries quickly so that clothing may be applied to the areas coated within five minutes. The coating lasts for a day or two and can be renewed by the patient.

"It is difficult to estimate how many months of hospitalization and how many extremities were saved by this simple protective measure. Nevertheless, gangrene was prevented in many patients, and some extremities were saved as the result of preventing the initial break in the skin without which gangrene will usually not start."

It was especially useful in treating diabetic patients who frequently have a tendency to dryness of skin and are thus more susceptible to skin cracking and gangrene.

Dr. Naide is a staff member of the Hospital of the University of Pennsylvania, the vascular clinics of the Woman's Medical College of Pennsylvania and the Einstein Medical Center, Southern Division.



## EDITORIAL

### Veterans' Medical Care Program

IN JUNE 1953 the AMA defined in clear and definite terms its stand on the care of the sick and injured veteran. In San Francisco recently, the House of Delegates of the AMA again, but in a more forceful manner, outlined its present policy and proposed a more vigorous plan of educating the physicians of America, and through them the laymen, in regard to the philosophy underlying the recommendations of organized medicine.

It was the considered opinion of the House of Delegates that the AMA has a responsibility for the health and welfare of the entire population and not for just a particular segment, and it, therefore, recommended that the Congress enact legislation limiting VA medical care and hospitalization benefits to:

- (1) Veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated, and to
- (2) Veterans with wartime service suffering from tuberculosis or psychiatric or neurological disorders of non-service connected origin, who are unable to defray the expenses of necessary hospitalization, provided that treatment is given within limits of existing facilities, and only until local facilities for such treatment are adequate.

The AMA believes that the responsibility for medical care of veterans, unable to pay, rests with the state and local governments along with other citizens in similar circumstances and that facilities for the care of *all* citizens can be made available when the communities and states reclaim their responsibility from the federal government.

The precepts enunciated have been widely publicized and leaders of American Medicine have appeared before several Congressional committees during the past year. In addition, there have been nine regional meetings throughout the country where members of the committee on Medical Services of the AMA have met with and indoctrinated representative members of state and local medical groups in the philosophy behind the stand of the AMA.

It is conceded that correction of the present law, which allows veterans with non-service connected injury or illness hospitalization and care at the expense of the taxpayer, will require much time and great effort but will eventually be successful because the basic and fundamental principle is just and, therefore, will be accepted by the American public when it is properly appreciated.

In Virginia, our Committee on Federal Medical Services has addressed several groups and attended many medical meetings in scattered areas of the State, familiarizing our physicians with the position of organized medicine and asking for the support of each physician in this effort to halt the expansion of a growing VA Medical Program, which is already second in size and expense only to the nation-wide system of socialized medicine of Great Britain. Members of this Committee will be available to any society, or group of physicians, to discuss with them any aspects of the proposals made to the Congress by the Officers of the AMA.

CHARLES M. CARAVATI, M.D.

## SOCIETY PROCEEDINGS

### The Medical Society of Northern Virginia

Met in Front Royal on August 10th under the presidency of Dr. E. L. Grubbs. Honorable Burr P. Harrison, representative of the 7th District of Virginia in the U. S. House of Representatives, spoke on Legislative Matters of Importance to the Medical Profession Now Before Congress. The following scientific program was presented: Routine Hospital Admission-Survey Chest X-rays by Drs. William N. Thomas and R. N. Armstrong; Presentation of a Case of Intestinal Obstruction by Dr. Dennis McCarty; and The Surgical Treatment of Certain Types of Heart Disease by Dr. J. Edwin Wood, Jr., University of Virginia.

The next meeting of this Society will be held in December. Dr. William C. Humphries, Woodstock,

is secretary-treasurer.

### The Mid-Tidewater Medical Society

Held its regular quarterly meeting at Urbanna on July 20th, under the presidency of Dr. H. L. Shinn, Mathews. The following program was presented: Management of Hypertension by Dr. Julian Beckwith; The Diagnosis and Treatment of Toxemias of Pregnancy by Dr. William Thornton; Present Concepts in the Treatment of Pulmonary Tuberculosis by Dr. E. C. Drash; and Uses of Radioactive Iodine in the Diagnosis and Treatment of Thyroid Disease by Dr. Guy Hollifield. All speakers are from the University of Virginia, Department of Medicine.

Dr. M. H. Harris, West Point, is secretary of this Society.

## NEWS

### Calendar of Coming Events

- ANNUAL ASSEMBLY IN OTOLARYNGOLOGY—University of Illinois College of Medicine—Chicago, September 6-11
- AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION—Washington, D. C., September 6-11
- AMERICAN ASSOCIATION OF BLOOD BANKS—7th Annual Meeting—Shoreham Hotel, Washington, D. C., September 13-15
- EVENING MEDICAL LECTURES—University of Virginia, School of Anatomy, Charlottesville, October 25. Dr. John C. Cutler, Washington, D. C., "Experimental Human Inoculation with Syphilis"
- THE MEDICAL SOCIETY OF VIRGINIA—(Annual Meeting)—First Interstate Scientific Assembly—Shoreham Hotel, Washington, D. C., October 31-November 3
- EVENING MEDICAL LECTURES—University of Virginia, School of Anatomy, Charlottesville, November 8. Dr. Lawrence E. Young, Rochester, N. Y., "Some Newer Concepts of Hemolytic Disorders"
- SOUTHERN MEDICAL ASSOCIATION—St. Louis, Missouri, November 8-11
- AMERICAN MEDICAL ASSOCIATION—Clinical Meeting—Miami, Florida, November 29-December 2

### The Virginia Society of Pathology

Will hold a regular meeting on November 2nd at the Sheraton Park Hotel, Washington, D. C. There will be a Seminar on Lesions of the Lower Respiratory Tract to be conducted by Dr. Averill A. Liebow, Professor of Pathology, Yale University School of

Medicine, with x-ray interpretation by Dr. F. B. Mandeville, Professor of Radiology of the Medical College of Virginia. Seminar slide sets may be procured by writing Dr. Gordon Hennigar, Department of Pathology, Medical College of Virginia, Richmond, at a cost of \$5.00 per set. All interested phy-

sicians are invited to attend this Seminar.

### **First Interstate Scientific Assembly.**

The program for this joint meeting of the Medical Society of the District of Columbia and The Medical Society of Virginia, to be held in Washington, October 31st through November 3rd, is published in this issue of the journal. Look it over carefully and we believe you will agree with us that you can't afford to miss this meeting. If you haven't made your reservations, do it at once!

### **The Virginia Society of Ophthalmology and Otolaryngology**

Will sponsor a post-graduate session in ophthalmology and otolaryngology at the University of Virginia from November 30th to December 3rd. The first two days will be devoted to otolaryngology lectures and the second two days to ophthalmological subjects.

Anyone interested may contact Dr. Edwin Burton or Dr. G. Slaughter Fitz-Hugh at 104 E. Market Street, Charlottesville.

The Spring meeting of this Society will be held at Natural Bridge Hotel, May 6 and 7, 1955.

### **The American College of Chest Physicians.**

At its 20th annual meeting in San Francisco, June 17-20, 1150 physicians and guests were registered. Dr. William A. Hudson, Detroit, was installed as president, and Dr. James H. Stygall, Indianapolis, was named president-elect.

Dr. Dean B. Cole, Richmond, is regent for the district and Dr. C. Lydon Harrell, Norfolk, is Governor of the College for Virginia.

### **Dr. H. B. Mulholland,**

Charlottesville, was elected as President of the American Diabetes Association at its meeting in San Francisco in June. He was one of the first members of this Association, has been a Councilor since 1947, and has served the last two years as vice-president.

### **Dr. James Q. Gant, Jr.,**

Washington, D. C., has just had a very unusual and distinct honor conferred upon him. Dr. H. Percy Wilkins, Director of the Lunar Section of the British Astronomical Association, recently announced that "The Lunar crater Archimedes-A will henceforth be known as Lunar Crater Gant, in honor of Dr. Gant, in recognition for his observations of lunar

surface details over many years."

Dr. Gant has his own observatory with a good sized telescope and has been carrying on research in observation of the moon since 1920. He is a graduate of the Medical College of Virginia, class of 1935.

### **Dr. Maurice A. Michael**

Has located for practice in Suffolk and is a member of the surgical staff of the Louise Obici Hospital. He is a native of Richmond but has been away from the State for thirty years, having recently been associate surgeon at the Jewish Hospital in Philadelphia.

### **University of Virginia Medical Alumni.**

Medical Alumni Day of the University of Virginia was held on June 11th. Alumni from nineteen states, representing thirty-six classes, attended. Dr. Edward R. Hipp, Charlotte, N. C., succeeded Dr. Vincent W. Archer, Charlottesville, to the presidency, and the following other officers were elected; vice-president and president-elect, Dr. Benjamin W. Rawles, Jr., Richmond; secretary, Dr. Vincent W. Archer, Charlottesville; and treasurer, Dr. McLemore Birdsong, Charlottesville. New members of the Board of Directors for a term of three years are Drs. Carrington Williams, Richmond; James P. King, Radford; Walter D. Hankins, Johnston City, Tenn.; and Dr. Archer.

### **Dr. T. S. Ely,**

Jonesville, has been reappointed as a member of the Lee County School Trustee Electoral Board for a term of four years.

### **State Board of Medical Examiners.**

The following were granted licenses to practice medicine and surgery in Virginia by endorsement of credentials at the meeting held on June 16th:

Dr. Allston G. Bailey, Richmond  
 Dr. William J. Bannen, Jr., Arlington  
 Dr. Eugene A. Clark, Jr., Falls Church  
 Dr. Ernest B. Cunningham, Bristol, Tenn.  
 Dr. Thomas M. Daniel, Richmond  
 Dr. Alfred M. Decker, Richmond  
 Dr. Sam B. Dillard, Charlottesville  
 Dr. Oscar Ellison, Jr., Falls Church  
 Dr. John Esau, Arlington  
 Dr. Esther G. Fagan, Lexington  
 Dr. James T. Fahey, Washington, D. C.  
 Dr. Joel W. Feldman, Christiansburg  
 Dr. Luke W. Frame, Christiansburg  
 Dr. Asher A. Friedman, Norfolk



Dr. Manuel Green, Arlington  
 Dr. C. Janett Hill, Washington, D. C.  
 Dr. Walter R. Holland, Lynchburg  
 Dr. Fordyce L. Howe, Ft. Wayne, Ind.  
 Dr. Russell B. Hunt, Richmond  
 Dr. Thomas H. Hunter, Charlottesville  
 Dr. Benjamin H. Inloes, Jr., Hampton  
 Dr. Robert T. Jackson, Bristol, Va.-Tenn.  
 Dr. John Jofko, Roanoke  
 Dr. Reginald H. Johnson, Durham, N. C.  
 Dr. Francis S. Jones, Norton  
 Dr. Benjamin H. Josephson, Woodside, N. J.  
 Dr. Bert A. Kanwit, Covington  
 Dr. Samuel A. Kirkpatrick, Portsmouth  
 Dr. Edward J. Kollar, Jr., Arlington  
 Dr. Harvey Kravitz, Triangle  
 Dr. Ross M. Lehman, Jr., Washington, D. C.  
 Dr. Leonard Leiberson, Newport News  
 Dr. Louis J. Maciulla, Washington, D. C.  
 Dr. Howard J. Maxwell, Franklin, W. Va.  
 Dr. Antonio Mayoral, Galax  
 Dr. Millard F. McKeel, III, Richmond  
 Dr. Marcy E. McMillan, Jr., Marion  
 Dr. Edwin T. McNamee, Jr., Stuart  
 Dr. M. Susan J. Mellette, Richmond  
 Dr. Faris S. Monsour, Jr., Richmond  
 Dr. James L. Morgan, Durham, N. C.  
 Dr. Charles B. Mundy, Dahlgren  
 Dr. James P. Murphy, Washington, D. C.  
 Dr. Philip F. Murray, Hampton  
 Dr. John J. Nolan, Cleveland, Ohio  
 Dr. Ralph J. Nold, Norfolk  
 Dr. John J. O'Connor, Richmond  
 Dr. Felix D. Paolucci, Washington, D. C.  
 Dr. Thomas J. Quilty, Roanoke  
 Dr. William W. Regan, Richmond  
 Dr. John W. Roark, Charlottesville  
 Dr. Charles L. Saunders, Jr., Martinsville  
 Dr. Robert L. Smith, Falls Church  
 Dr. Garrett M. Swain, Arlington  
 Dr. William Tenenblatt, Washington, D. C.  
 Dr. William W. Thompson, Radford  
 Dr. Gerald M. Tierney, Ft. Myer  
 Dr. Sidney A. Tyroler, Falls Church  
 Dr. George M. Warner, Richmond  
 Dr. Paul C. Wheeler, Waynesboro  
 Dr. David H. Williams, Boiesevain  
 Dr. Homer A. Wilson, Roanoke  
 Dr. Frederick C. Wyttenbach, Bluefield, W. Va.

The following were granted license to practice medicine in Virginia by examination:

Dr. Hassen Abtahi, New York, N. Y.  
 Dr. Donald Murdough Allen, Front Royal  
 Dr. Thurl Ernest Andrews, Richmond  
 Dr. Stuart Ashman, Virginia Beach  
 Dr. Gerald D. Aurbach, Boston, Mass.  
 Dr. Claude N. Ballenger, Charlottesville  
 Dr. Edward A. Barham, Jr., Portsmouth

Dr. Letcher B. Barnes, Blackstone  
 Dr. Emerson D. Baugh, Jr., Lawrenceville  
 Dr. Donald L. Baxter, Richmond  
 Dr. Baxter I. Bell, Jr., Norfolk  
 Dr. Robert R. Bender, Richmond  
 Dr. Henry B. Betts, Charlottesville  
 Dr. Charles M. Biller, Arlington  
 Dr. Meriwether C. Blaydes, Rochester, N. Y.  
 Dr. Irwin M. Bogarad, Tonawanda, N. Y.  
 Dr. Stanley C. Boyce, Denver, Col.  
 Dr. Harrison O. Brown, Jr., Virginia Beach  
 Dr. James R. Brunk, Charlottesville  
 Dr. Charles B. Burch, III, Richmond  
 Dr. Paul M. Burd, Richmond  
 Dr. Lawrence D. Burtner, Roanoke  
 Dr. Donald W. Callahan, Norfolk  
 Dr. Hall G. Canter, Richmond  
 Dr. John S. Chapman, Lexington  
 Dr. Rees C. Chapman, Richmond  
 Dr. James R. Cochran, Warwick  
 Dr. Waverly M. Cole, Norfolk  
 Dr. Henry F. Conquest, Richmond  
 Dr. Robert M. Cook, Jr., Richmond  
 Dr. Lawrence S. Cowling, Philadelphia, Pa.  
 Dr. Louis C. Craig, Charlottesville  
 Dr. Junius E. Crowgey, Roanoke  
 Dr. Ralph M. Curt, Columbia, S. C.  
 Dr. William R. Dabney, III, Syracuse, N. Y.  
 Dr. David C. Davis, Charlottesville  
 Dr. Leonard L. Davis, Jr., Richmond  
 Dr. James A. Doull, Jr., Cleveland, Ohio  
 Dr. Helen L. J. Driskill, Portsmouth  
 Dr. William L. Driskill, Jr., Portsmouth  
 Dr. James H. Dwyer, Richmond  
 Dr. William F. Early, Norfolk  
 Dr. John T. Edmonds, Accomac  
 Dr. Bille W. Elliott, Richmond  
 Dr. William F. Enos, Arlington  
 Dr. Douglas W. Ey, Richmond  
 Dr. Maxwell C. Feinman, Charlottesville  
 Dr. Harold W. Felton, Eloise, Mich.  
 Dr. William Ferguson, Staunton  
 Dr. John W. Fewell, Philadelphia, Pa.  
 Dr. Conway H. Ficklen, Charlottesville  
 Dr. Sarah E. Forbes, Warwick  
 Dr. Philip Frederick, Jr., Richmond  
 Dr. Rudolph C. Garber, Jr., Richmond  
 Dr. John R. Gill, Jr., Mathews  
 Dr. Edgar C. Goldston, Richmond  
 Dr. Julius T. Goodman, Christiansburg  
 Dr. Lloyd L. Goulder, Jr., Petersburg  
 Dr. Thomas W. Gouldin, Birmingham, Ala.  
 Dr. Milton Greenberg, Charlottesville  
 Dr. William Crockett Greer, Rocky Mount  
 Dr. Alastair N. Guthrie, Portsmouth  
 Dr. William B. Hall, Jr., Critz  
 Dr. Henry R. Harrison, Jr., Danville  
 Dr. John P. Heatwole, Norristown, Pa.  
 Dr. Guy C. Heyl, Jr., Charlottesville

Dr. James A. Higgs, Jr., Staunton  
 Dr. Harold D. Hill, Charleston, W. Va.  
 Dr. Charles A. Hoffman, Jr., Richmond  
 Dr. Mary Lou Hoover, Timberville  
 Dr. Farrar W. Howard, Richmond  
 Dr. Alvin J. Hurt, Roanoke  
 Dr. Charles W. Hurt, Charlottesville  
 Dr. Ralph A. Jackson, Jr., Cleveland, Ohio  
 Dr. Manuel O. Jaffe, Richmond  
 Dr. Benno Janssen, Jr., Charlottesville  
 Dr. Wilburn E. Jarrell, Charlottesville  
 Dr. Rose D. Jenkins, Norfolk  
 Dr. Freeman W. Jenrette, Roanoke  
 Dr. Earl R. Johnston, Jr., Charlottesville  
 Dr. James H. Johnson, Woodville  
 Dr. Wayne L. Johnson, Roanoke  
 Dr. John H. Jolly, Cleveland, Ohio  
 Dr. Beverley B. Jones, Roanoke  
 Dr. Philip McC. Kernan, Jr., Tacoma, Wash.  
 Dr. Robert M. Kesler, Fredericksburg  
 Dr. Alan E. Kinsel, Portsmouth  
 Dr. Emerson L. Kirby, Victoria  
 Dr. Robert C. Kluge, Portsmouth  
 Dr. Reinald Leidelmeyer, Catawba Sanatorium  
 Dr. Edward O. Leventen, Norfolk  
 Dr. Edward G. Lewis, Charleston, W. Va.  
 Dr. William D. Liddle, Jr., Charlottesville  
 Dr. A. Ross Lillard, Stephens City  
 Dr. Thomas P. Long, Roanoke  
 Dr. Ivan V. Magal, Richmond  
 Dr. Hubert A. Marshall, Roanoke  
 Dr. Sophocles D. Marty, Richmond  
 Dr. Edna T. Maura, Richmond  
 Dr. Joe E. McCary, Princeton, W. Va.  
 Dr. Randolph McCutcheon, Jr., Richmond  
 Dr. James V. McKenzie, Quinwood, W. Va.  
 Dr. Donald H. McNeill, Jr., Winchester  
 Dr. George S. Mitchell, Jr., Hilton Village  
 Dr. Joe E. Mitchell, Charlottesville  
 Dr. John H. Moling, III, Winchester  
 Dr. Willie H. Morris, Jr., Lynchburg  
 Dr. Kenneth A. Morrissey, Charlottesville  
 Dr. Richard M. Newton, Narrows  
 Dr. Ernest M. Nielsen, Alexandria  
 Dr. William F. Orlinger, Coeburn  
 Dr. Robert A. Orr, Leesburg  
 Dr. Beryl H. Owens, Rose Hill  
 Dr. Reigh E. Peck, El Paso, Texas  
 Dr. Alton L. Powell, III, Richmond  
 Dr. James D. Price, Norfolk  
 Dr. Paul E. Prillaman, Jr., Ronceverte, W. Va.  
 Dr. Ernest G. Rafey, Cincinnati, Ohio  
 Dr. William E. Reish, Norristown, Pa.  
 Dr. Laurie E. Rennie, Richmond  
 Dr. Robert D. Richards, Roanoke  
 Dr. Betty J. Richter, Richmond  
 Dr. Mason G. Robertson, Savannah, Ga.  
 Dr. Basil E. Roebuck, Williamsburg  
 Dr. Philip A. Rosenfeld, Washington, D. C.

Dr. Stanley D. Rosenthal, Baltimore, Md.  
 Dr. Edmund H. Rucker, Jr., Charlottesville  
 Dr. Samuel B. Ryburn, Richmond  
 Dr. George E. Salley, Richmond  
 Dr. Paul H. Schellenberg, Arlington  
 Dr. George W. Sessoms, Charlottesville  
 Dr. Edward H. Sharp, Richmond  
 Dr. Alton R. Sharpe, Jr., Richmond  
 Dr. James B. Spillman, II, Charlottesville  
 Dr. Teddy C. Staples, Winchester  
 Dr. Theodore N. Steffen, Hampton  
 Dr. James L. Stringfellow, Jr., Culpeper  
 Dr. William T. Stuart, Jr., Richmond  
 Dr. Charles E. Swecker, Norfolk  
 Dr. Lilburn T. Talley, Richmond  
 Dr. Arthur L. Thiele, Natick, Mass.  
 Dr. Pendleton E. Thomas, III, Richmond  
 Dr. George A. Thompson, Bastian  
 Dr. Lee H. Thompson, Charlottesville  
 Dr. Webb M. Thompson, Jr., Virginia Beach  
 Dr. Samuel A. Tisdale, Jr., Portsmouth  
 Dr. Franklin V. Tweedy, Lynchburg  
 Dr. Joseph A. Vance, III, Old Church  
 Dr. Archibald C. Wagner, Richmond  
 Dr. Walter Weintraub, Brooklyn, N. Y.  
 Dr. Marion F. Wells, St. Petersburg, Fla.  
 Dr. Ceilous L. Williams, Jr., Charlottesville  
 Dr. Frances S. Williams, Lynchburg  
 Dr. Robert O. Williams, Norfolk  
 Dr. Ohlen R. Wilson, Galax  
 Dr. Thomas C. Wilson, Charleston, W. Va.  
 Dr. Ellis N. Zuckerman, Richmond

#### Dr. D. H. Mason,

Ridgeway, has been re-elected chairman of the Henry County School Board. He has served continuously as a member of the Board since 1918 and as chairman since 1923. The Drewry Mason High School, near Ridgeway, is named in his honor.

#### Richmond Inaugurates All-Night Medical Aid Service.

The Richmond Academy of Medicine has inaugurated an all-night service designated to make certain that a doctor will answer any emergency call in the Richmond area. Dr. Benjamin W. Rawles, president, announced that 210 doctors had agreed to take the emergency assignments on a rotating basis. One doctor each night, from 5 P. M. to 8 A. M., will be available through the doctors' telephone exchange to handle emergency calls. Most of such calls come from persons without a regular doctor and the service is not intended to relieve any doctor of his responsibility to his own patients.

**Dr. Charles M. Irvin**

Has been appointed health commissioner for the City of Roanoke. He has held the position for the past year on a temporary basis, following the resignation of Dr. J. N. Dudley.

**Dr. Snowden C. Hall,**

Danville, has been appointed by Governor Thomas B. Stanley as a member of the State Board of Medical Examiners. He succeeds Dr. W. J. Hagood, Clover.

**Members of State Board of Opticians.**

Governor Thomas B. Stanley has appointed Drs. Walter J. Rein, Richmond, and Charles A. Young, Sr., Roanoke, as members of the new State Board of Opticians. This board is charged with regulating the work and technical qualifications of all new Virginia opticians who make and dispense eyeglasses on prescription. It was created by the 1954 legislature.

**Dr. Josiah T. Showalter,**

Christiansburg, has been elected chairman of the regional coordinating committee of the American Red Cross.

**Dr. William A. Cover**

Has opened his office for general practice in Tazewell. He was recently located for six years at Big Rock in Buchanan County.

**Dr. G. Watson James, III,**

Richmond, will present a paper on Stercobilin and Hematopoiesis as part of a symposium on the Nutritional Aspects of Blood Formation. This symposium, to be held at the University of Cincinnati on October 22nd, is made possible by support from the National Vitamin Foundation.

**American College of Chest Physicians**

The Potomac and Virginia Chapters of the American College of Chest Physicians will hold a joint meeting, opening at 9:30 A.M., Sunday, October 31, 1954, at the Shoreham Hotel, Washington, D. C.

All physicians are cordially invited to attend. There is no registration fee for guests or members.

The program will include symposia on Cardiac Surgery and Bronchogenic Carcinoma, a panel discussion on Problems Encountered in the Present Day Management of Tuberculosis and round table luncheons on Pulmonary Emphysema and Evaluation of Patients for Cardiac Surgery.

**Drs. Young, Young and Fountain.**

Drs. Charles A. Young, Sr. and Jr., and Dr. Newland W. Fountain have opened a branch office at Carlton Terrace Building, Suite 115, 920 South Jefferson Street, Roanoke. Their main office continues to be in the Medical Arts Building.

**Virginia to Have Four Mobile Hospitals.**

Dr. W. R. Southward, Civil Defense Medical Service Director, has announced that four complete mobile emergency hospitals for use in case of enemy attack or other disaster have been ordered. One unit will be staffed by personnel from the Medical College of Virginia, one by the University of Virginia Hospital, one by the Winchester Memorial Hospital, and the other by several Roanoke Hospitals. A fifth unit may be ordered later for the Hampton Roads area.

The units weigh about 13½ tons each and can be transported by truck or airplane. They include x-ray and surgical equipment and all equipment for a 200-bed emergency hospital except the beds themselves.

**Desires Association.**

General Practitioner, now qualified Psychiatrist, licensee Virginia, presently practicing in Indiana, desirous of establishing association with group or individual, in Virginia, with view to developing Psychiatric Treatment Center, on an Out-Patient basis, to include Psycho, Electro, and Occupational Therapy. Also interested in Industrial Psychiatry. Must have basis salary, plus. Reply in first instance to "Psychiatrist", care Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (.1dv.)

---

**OBITUARIES**

---

**Dr. Paul Williamson Howle,**

Prominent Richmond physician, died July 26th after a long illness. He was a native of Sussex

County and was seventy-nine years of age. He was a graduate of the former University College of Medicine, Richmond, in 1898, following which he began



his practice at Mt. Carbon, W. Va., where he was a mining company physician. Dr. Howle located in Richmond in 1908. He was chief physician at the City Jail for about thirty-five years. Dr. Howle had been a member of The Medical Society of Virginia since 1899 and for a number of years served as a member of its Publication Committee. His wife and two children survive him.

**Dr. Edgar Calvin LeRoy Miller,**

Former Librarian of the Medical College of Virginia, died July 21st at the home of his daughter in San Diego, California. He was eighty-seven years of age and a graduate in medicine from the University of Michigan. Dr. Miller spent five years as a medical missionary in India before coming to Richmond as professor of pharmacology at the Medical College of Virginia. He established the first biochemistry department there and was at one time dean of the School of Medicine. Dr. Miller became librarian in 1930 and retired in 1947 with the title of librarian emeritus. He was a collaborator on revision of the American Illustrated Medical Dictionary until two years ago. Dr. Miller was founder of the Virginia Academy of Science and served as its secretary for twenty-six years. He had been a member of The Medical Society of Virginia for forty-two years.

**Dr. Allen Weir Freeman,**

Nationally known physician of Baltimore, Maryland, died July 3rd after an illness of several months. He was born in Lynchburg and was seventy-three years of age. Dr. Freeman graduated from Johns Hopkins Medical School in 1905. He was a former dean of the Johns Hopkins School of Hygiene and Public Health and was a crusader for preventive medicine and for better organization among doctors in the treatment of disease. He was known as "The Epidemic Chaser". Dr. Freeman had been a member of The Medical Society of Virginia since 1908.

**Dr. James Felmer Hubbard,**

Waynesboro, died June 29th, at the age of seventy-nine. He was a graduate of the former University College of Medicine in Richmond in 1908. Dr. Hubbard had practiced in Waynesboro for thirty-three years. He was a Mason and had been a mem-

ber of The Medical Society of Virginia since 1908. A son and a daughter survive him.

**Dr. Robert H. Newman,**

Vinton, died May 3rd, at the age of sixty-eight. He was a graduate of the former University College of Medicine, Richmond, in 1910. Dr. Newman had been a member of The Medical Society of Virginia for forty-four years.

**Dr. Isaac Roy Wagner,**

Gordonsville, died July 17th. He was seventy-six years of age and received his medical degree from the University of Virginia in 1905. Dr. Wagner was with the Veterans Administration Facility until his retirement in 1945 when he moved to Gordonsville. He had been a member of The Medical Society of Virginia since 1906.

**Dr. James Edward Amiss,**

Altavista, died July 18th after an illness of two years. He was forty-eight years of age and a graduate in medicine from the University of Virginia in 1930. Dr. Amiss spent 18 years in active and reserve duty with the U. S. Navy and had the rank of commander. He practiced at New Market before locating at Altavista where he had been for the past eight years. Dr. Amiss had been a member of The Medical Society of Virginia for twenty years. His wife and three children survive him.

**Dr. Lyle Jamesson Hansbrough,**

Front Royal, died July 5th of malignant leukemia. He was forty-three years of age and graduated from the University of Virginia, School of Medicine, in 1936. Dr. Hansbrough was the third generation of his family to practice in Front Royal. He had been a member of The Medical Society of Virginia for eleven years. His wife and five sons survive him.

**Dr. Christian Kevin Campbell Hoyle,**

Swannanoa, N. C., died July 17th of a cerebral aneurysm, at the age of forty-nine. He was a native of London, England, and graduated in medicine from the University of Virginia in 1939. Dr. Hoyle was assistant chief of general medical service at the Swannanoa division of Oteen VA Hospital. He had been a member of The Medical Society of Virginia for thirteen years. His wife and a son survive him.

# Meat...

## *and Protein Nutrition*

## *in Cardiac Failure*

Recent studies confirm previous clinical observations of the high incidence of hypoproteinemia and muscle wasting in patients with chronic cardiac failure. Recognition of these serious nutritional alterations prompts "the administration of large quantities of dietary protein and supplemental vitamins."<sup>1</sup>

Basic foods requiring primary consideration for providing adequate daily nutrition in such patients are:

"Milk—1 pint; meat—4 ounces; vegetables—2 servings; fruit and fruit juices—3 servings; carbohydrate and fat to fulfill caloric needs.

"In order to restore depleted protein levels, it is necessary to increase the protein component by adding meat servings . . ."<sup>1</sup>

Since anorexia usually complicates nutrition in cardiac failure, appetizingly prepared meat encourages adequate eating. The high protein content of cooked lean meat, 25 to 30 per cent, as well as its high biologic value, serves well in mitigating hypoproteinemia and muscle wasting.

Meat also contributes valuable amounts of B vitamins especially needed by the cardiac patient, including both the well-known and the less well-known members of the B complex. Iron, potassium, and phosphorus are among the minerals richly supplied by meat.

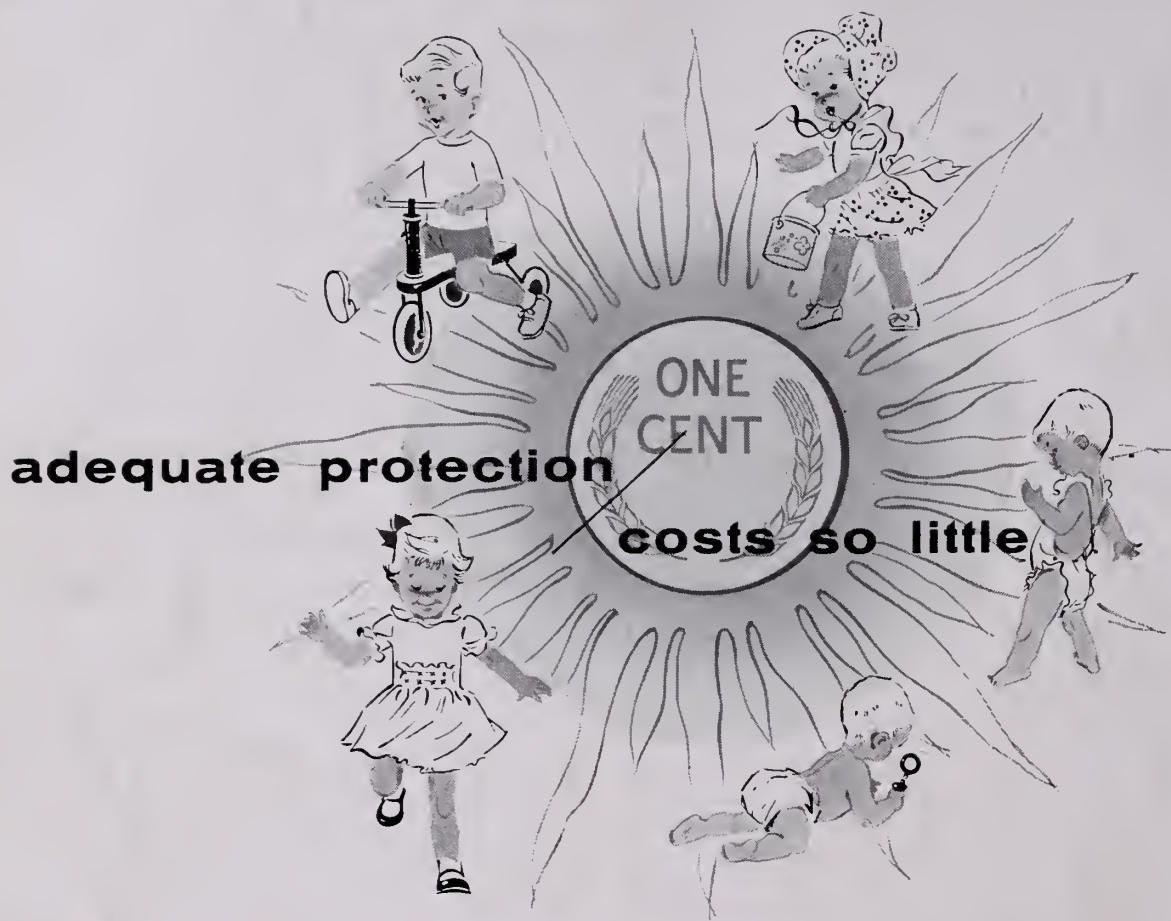
---

1. Shuman, C. R., and Wohl, M. G.: Nutritional Aspects of Heart Failure, J. Clin. Nutrition 2:5 (Jan.-Feb.) 1954.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



**American Meat Institute**  
Main Office, Chicago...Members Throughout the United States



No child need be denied protection against the threat of rickets and vitamin A and D deficiencies.

Mead's Oleum Percomorphum is a potent, dependable source of vitamins A and D . . . that can be given at a cost of about a cent a day.

Specify Mead's Oleum Percomorphum . . . the pioneer product with twenty years of successful clinical use. Dosage, 5 to 10 drops daily.



Available in 10 cc. and economical 50 cc. bottles; also in bottles of 50 and 250 capsules.

## MEAD'S OLEUM PERCOMORPHUM

*The economical, potent vitamin A and D drops*



# VIRGINIA MEDICAL MONTHLY

## *Contents*

The Diagnosis and Treatment of Soft Part Sarcomas

Lemuel Bowden, M. D. . . . 463

Hemolytic Disease of the Newborn, Marian Waller, M.S.,

and Albert M. Edmonds, M.D. . . . 471

Trichobezoar, William F. Barry, Jr., M.D. . . . 475

Clinicopathological Conferences, Gordon Hennigar, M.D.,

and Wm. R. Kay, M.D. . . . 478

(Continued on page 6)

ACADEMY  
OF MEDICINE  
OCT 11 1954  
LIBRARY

consider  
**ILOTYCIN**  
(ERYTHROMYCIN, LILLY)  
**FIRST**

... because its  
antibiotic  
spectrum is  
unexcelled

'Ilotycin' is effective against over 80 percent of all bacterial infections;  
yet the bacterial balance of the intestine is not significantly disturbed.

*Lilly*



**produces contractions**

*"clinically identical to normal, strong, physiological labor"*

# Virginia Medical Monthly

Vol. 81, No. 10  
WHOLE No. 1228

RICHMOND, VA., OCTOBER, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## THE DIAGNOSIS AND TREATMENT OF SOFT PART SARCOMAS\*

LEMUEL BOWDEN, M.D.,

Assistant Attending Surgeon, Mixed Tumor Service, Memorial Hospital,  
New York, N. Y.

A better introduction to sarcomas of soft tissue origin cannot be given than that of Doctor Arthur Purdy Stout who, in speaking of these lesions, said: "The common malignant tumors are advertised to the public and their recognition and treatment, morbidity and mortality, incidence and etiology, experimental study, and every other phase of them now receive intensive, ceaseless attention. But the uncommon tumors, unless they happen to be hormonally active or to involve a popular organ like the ovary, are still relatively unknown, poorly understood and, as a natural consequence, generally badly treated."<sup>30</sup>

Sarcomas of soft tissue origin are not common. Exact figures of the incidence, prevalence and total case rate of these tumors in the population as a whole are not at hand. Several excellent statistical studies of the occurrence of cancer in certain localities in the United States are available and provide the figures contained in Table I. It will be seen that probably 2 to 4 new cases of soft part sarcoma may be expected in each group of 100,000 persons per year. Although the individual practitioner will, therefore, infrequently encounter these tumors, they present an interesting group of neoplasms whose diagnosis is not difficult and whose treatment is often rewarding.

TABLE 1  
SOFT PART SARCOMAS  
Patients per 100,000 population per year  
Incidence Prevalence Total Case Rate

Atlanta, 1947 <sup>5</sup> -----	1.9	2.5	---
San Francisco, 1947 <sup>6</sup> ---	4.1	5.2	---
New Orleans, 1947 <sup>7</sup> ---	2.2	3.6	---
Connecticut, 1940-1946 <sup>12</sup>	2.3	--	23.4
Onondaga County, N.Y. <sup>33</sup> --		3.8	---
1940-46			

Dorn<sup>9</sup> defines the above headings as follows: *Incidence* is the relative number of cases first diagnosed in a given year; *Prevalence* is the relative number

of cases diagnosed or treated at any time during the year; and *Total Case Rate* is the relative number of cases diagnosed, treated or being observed only during the year.

In an institution specializing in the treatment of cancer, however, these tumors are seen with greater frequency and in greater number. The following review is based on the composite experience of the Mixed Tumor Service at Memorial Hospital in the management of more than 700 cases of soft part sarcoma encountered from 1926 through 1951.

### DIAGNOSIS

As with many forms of cancer the early diagnosis of sarcomas of the soft tissue depends on a high degree of suspicion that cancer may be present. There is no finding pathognomonic of a soft part sarcoma. A review of the more common symptoms and signs is noteworthy for its brevity:

*Symptoms:* A non-tender, progressively enlarging mass in skin, subcutaneous tissue, or deeper structures is the only complaint offered by the average patient. Its duration and rate of growth, if short and rapid, may strongly suggest sarcoma, but this symptom must be evaluated dispassionately since patients are notoriously inaccurate in matters of time and dimension. If the mass happens to be so situated as to interfere with the anatomical or functional integrity of contiguous structures or organs, symptoms referable to the displaced or deranged structure may assume prominence. Thus, a patient may complain of "varicose veins" in an extremity in which a sarcoma by its size and location has obstructed the venous return. Or, by pressure on or invasion of a nerve trunk, a sarcoma may give rise to symptoms of neuralgia throughout the area normally supplied by the nerve. Sarcomas arising near joints may by their space-occupying characteristics produce restriction of motion at the joint.

A history of injury to the area prior to or con-

\*Presented at the 58th annual meeting, Seaboard Medical Association, Norfolk, Va., November 17, 1953.



comitant with the development of a sarcoma is mentioned by the patient with sufficient frequency to warrant comment. While no one can positively deny that a sarcoma may arise from single, acute trauma, it is generally agreed that such etiology is unlikely. Rarely, indeed, can any tumor satisfy the Segond<sup>23</sup> postulates and be accepted as traumatic in origin. While sarcomas appear more frequently to have an antecedent history of trauma than carcinomas, this is probably explained by the frequent location of sarcomas in the extremities and exposed areas of the body which are necessarily more subject to acute trauma than are the viscera where carcinoma is more common. To explain most of the alleged post-traumatic neoplasms, the late Doctor James Ewing introduced the concept of "traumatic determinism", by which is meant the tendency of a part already harboring a neoplasm to be subject to injury which, in turn, leads to recognition of the tumor.

*Signs:* The recognition of a superficial soft tissue mass is readily accomplished, while palpation of a deeper-lying tumor may require the physician to examine a patient in several positions with attention directed toward relaxing normally tensed joints, fascial sheets, and muscle bundles. The size of a mass is obviously of little diagnostic consequence since this will vary directly with the duration of the tumor.

The physical characteristics of a soft tissue mass, on the other hand, may be of some diagnostic significance since benign tumors in general tend to be well-encapsulated, homogenous throughout and freely movable over deeper structures, while sarcomas often present indefinite outline, variation in consistency and some degree of fixation to underlying structures as well as to overlying skin.

*Laboratory Studies:* Roentgenograms of the affected area may on occasion contribute to the establishment of a diagnosis. A benign soft tissue tumor will frequently appear as a discreet, well-demarcated area of water density in soft-tissue films. Sarcomas may be suspected when soft tissue swelling is evident with no discreet mass discernible in the roentgenogram. Evidence of soft tissue calcification may be suggestive of certain sarcomas, such as extrasosseous osteogenic sarcoma, neuroblastoma, and occasionally synovial sarcoma, but may also be seen in deep-lying angiomas,<sup>11</sup> as well as in certain non-neoplastic diseases, such as myositis ossificans. His-

tologic study of representative material from a soft tissue tumor is the only laboratory procedure of diagnostic importance.

*Biopsy:* When a soft part sarcoma is suspected, diagnosis must be established by biopsy before definitive treatment is undertaken. If a sarcoma has ulcerated through the overlying skin, a satisfactory biopsy often may be obtained without anesthesia from the area of fungation. Biopsy under anesthesia is, however, usually required. Depending upon the size of the tumor, either incisional biopsy or excisional biopsy may be performed. Incision is made over the lesion through skin which, if sarcoma is proved to be present, is subsequently to be sacrificed surgically or to be included within a field of radiation. In large tumors a generous wedge of tissue is removed from the mass, hemostasis secured, and the wound closed without drainage. In small tumors the entire mass may be removed for biopsy, hemostasis secured, and the wound closed without drainage. In the latter instance in which local enucleation of the entire mass<sup>a</sup> is performed, it cannot be sufficiently emphasized that definitive treatment has thus NOT been accomplished. In spite of the pseudo-encapsulation of many sarcomas, the high incidence of recurrence following local excision demands that further treatment be carried out.

Aspiration biopsy, which has the advantage of simplicity and ease of performance under local anesthesia, may be employed for diagnosis in certain instances. Although theoretical objections to aspiration biopsy have been voiced, we have seen no undesirable complications directly attributable to this diagnostic procedure when properly employed. The limitations of aspiration biopsy are real, however. Many pathologists are unwilling to render opinion on material so obtained. Furthermore, it is often impossible thus to secure accurate histologic (contrasted with cytologic) classification on which may depend the form of definitive treatment subsequently to be instituted.

#### TREATMENT

Although it is the opinion of many physicians that certain forms of cancer are essentially incurable because of their extremely poor survival rate irrespective of treatment administered, and that to treat such forms of cancer with the intention of cure is unrealistic and unwarranted, it is our opinion that such a negativistic approach is untenable even if only one patient in a hundred may be cured. Sta-

tistics are misleading when applied to a single individual, for that one patient may be the sole survivor who is necessarily as completely and permanently cured as the other 99 patients are not. Even if the difference between 99 fatalities and 100 fatalities is negligible to the statistician, how much to the contrary it is to the one patient who, by aggressive and adequate treatment is cured!

Akin to the therapeutic nihilist is the physician who employs the fallacious principle of a small operation for a little cancer and a big operation for a big one, or who indulges in the hope that a given cancer may be a "favorable" one so that radical or mutilating therapy can be avoided. By such attitudes a patient may well be deprived of his chance for cure.

For the patient with a localized soft tissue sarcoma, treatment must be accurate, aggressive and adequate. Accurate therapy implies a knowledge of the histologic pattern of the neoplasm from which can be deduced its probable characteristics of growth and behavior. Aggressive therapy requires that the physician have a clear understanding of the malignant potentialities of the tumor, regardless of its apparent small size or innocuous course to the time of treatment. Adequate therapy can only be interpreted as that which will effect local eradication of the lesion. When local control of a tumor has been achieved, the subsequent development of distant metastases cannot be strictly considered evidence of failure in treatment method. Local recurrence of the tumor after treatment, however, can only be interpreted as proof of indifferent, inadequate treatment. In some instances adequate treatment may still be offered a patient with local recurrence of sarcoma. Nevertheless, in many instances, local recurrence gives rise to, or is coincident with, disseminated metastases which doom further treatment to ultimate failure although effective palliation may sometimes be accomplished.

*Surgical Treatment:* In general, it may be said that sarcomas arising from fibrous tissue, from heterotopic bone and cartilage, from smooth and striated muscle tissue and from peripheral nerve tissue (i.e., fibrosarcoma, extra-osseous osteogenic sarcoma, leiomyosarcoma, rhabdomyosarcoma and malignant neurilemoma) require surgical treatment in order to offer the patient a chance for cure. Sarcomas arising from adipose tissue, from vascular tissue and from synovial tissue (i.e., liposarcoma,

angiosarcoma and synovial sarcoma) usually are best treated by surgery. Surgical treatment of soft tissue sarcomas require the surgeon to perform more or less mutilating procedures as a rule. Accumulating evidence indicates that many sarcomas spread by direct extension along contiguous fascial planes and muscle fasciculi (Fig. 4). It is our belief, therefore, that adequate resection of a soft tissue sarcoma entails wide sacrifice of surrounding soft tissue, including fascia and entire muscle bundles at their points of origin and insertion. Optimally, this should be accomplished without exposing recognizable tumor at any point of the procedure. Depending, therefore, upon the anatomical location of the tumor, adequate surgical treatment may be accomplished in some instances by radical block resection of soft tissue (Fig. 1), while in other instances amputation is required (Fig. 2).

To lessen the possibility of mechanical dissemination of neoplastic cells from operative manipulation, it is desirable, when technically feasible, to ligate the major venous tributaries draining the site of sarcoma early in the operative procedure, or, failing this, to employ a venous tourniquet proximal to the operative field. The advantages of either of these methods are admittedly theoretical. In practice these advantages are probably achieved by beginning the surgical dissection proximal and proceeding distally.

*Radiation Therapy:* As with surgical treatment, a preliminary biopsy is obligatory in order to establish not only the presence of sarcoma but its histologic type as well. In general, it may be stated that sarcomas arising from undifferentiated mesenchymal tissue and from lymphatic and reticulo-endothelial tissue (i.e., neuroblastoma, lymphocytoma and reticulum-cell sarcoma) are best treated by radiation therapy. In liposarcoma, angiosarcoma and synovial sarcoma, radiation therapy may be employed under certain circumstances but rarely with the hope of cure. Some highly anaplastic sarcomas of uncertain histogenesis may also be thus effectively treated.

Aggressive radiation therapy requires formulation of a specific plan of treatment with due consideration of physical factors employed. Attention must be directed to daily and total dosage and time factors, as well as to size and number of radiation portals so as to provide radiation saturation of all tissues invaded by neoplastic cells. To sterilize the central area of the tumor by x-ray but to allow





Fig. 1.—R. B. (A) Surgical scar of right posterior thigh following resection of muscle, fascia and subcutaneous tissue of posterior compartment for rhabdomyosarcoma arising in short head of biceps femoris. (B) Palpable right lower quadrant mass, indicated by skin mark, noted 14 months following above-described resection. (C) Surgical specimen of the right radical groin dissection, demonstrating metastatic rhabdomyosarcoma in right external iliac node, removed 14 months following control of primary tumor.



Fig. 2.—S. F. (A) Huge recurrent malignant neurilemoma of the left buttock, believed to have developed in a pre-existing benign neurofibroma. Note café-au-lait skin pigmentation characteristic of generalized von Recklinghausen's disease. (B) Surgical specimen following left hemipelvectomy, demonstrating intrapelvic extension of tumor (from Bowden, L., and Booher, R. J., *Surgical Considerations in the Treatment of Sarcoma of the Buttock*, Cancer 6:89-99, 1953).



its periphery to propagate accomplishes little for the patient. To produce permanent local eradication of tumor by radiation therapy requires inevitably a protracted and faithfully continued program. This will, incidentally, cause desquamation of overlying skin with slow subsequent healing. The late sequelae of radiation therapy, including radiation osteitis, subcutaneous fibrosis, skin telangiectasia and atrophy, must also be anticipated.

A belief commonly held by physicians and laymen alike that radiation therapy is an easier form of treatment than surgery is questionable. From the patient's standpoint, curative irradiation requires daily visits to the roentgenotherapist for several weeks, followed by an equal length of time, as a rule, of semi-invalidism while radiation reaction subsides and healing occurs. Annoying symptoms of "radiation sickness" may be experienced by the patient, as well as the late sequelae of intensive irradiation already mentioned. From the therapists' standpoint, curative irradiation requires most careful planning of cross-firing beams so as to deliver adequate x-ray to center and periphery alike, as well as daily personal attention to make sure this plan is effected.

*Combined Irradiation and Surgery:* It should be stated at once that inadequate surgical treatment combined with inadequate radiation treatment has never been known to effect a cure of cancer. Nevertheless, recent reports indicate that combined radiation and surgical therapy may be used to advantage under certain circumstances. In this country, Pack

and Miller<sup>15</sup> have reported their experiences in rendering primarily inoperable lesions operable by preliminary roentgenotherapy. In England, Sir Stanford Cade,<sup>4</sup> in reporting experience with 153 patients with soft part sarcomas, noted better results in the patients given sublethal protracted irradiation preceded or followed by surgery than in those in whom surgery alone was employed. He proposes that such irradiation, by virtue of chromosomal break and gene mutation in the cancer cell, destroys its power of propagation even though the cell itself remains viable. We are inclined to believe that the occasional good result we have achieved in "radio-resistant" sarcoma by means of sublethal irradiation and surgery would probably have been obtained by surgery alone. Nevertheless, the occasional case is seen in which surgery is out of the question until radiation therapy has been first administered (Fig. 3).

*Treatment of Metastases:* It is a well recognized fact that soft part sarcomas classically spread via the blood stream. It is not so well recognized, however, that soft part sarcomas may spread via lymphatics to lymph nodes or that these tumors may spread by direct extension along muscle bundles and fascial planes (Fig. 4).

Treatment of such local spread along muscle and fascial planes should be accomplished simultaneously with control of the primary tumor, whether treatment be by surgery or by irradiation.

Sarcomatous lymph node metastases occur in perhaps 5% to 25% of patients with reticulum-cell

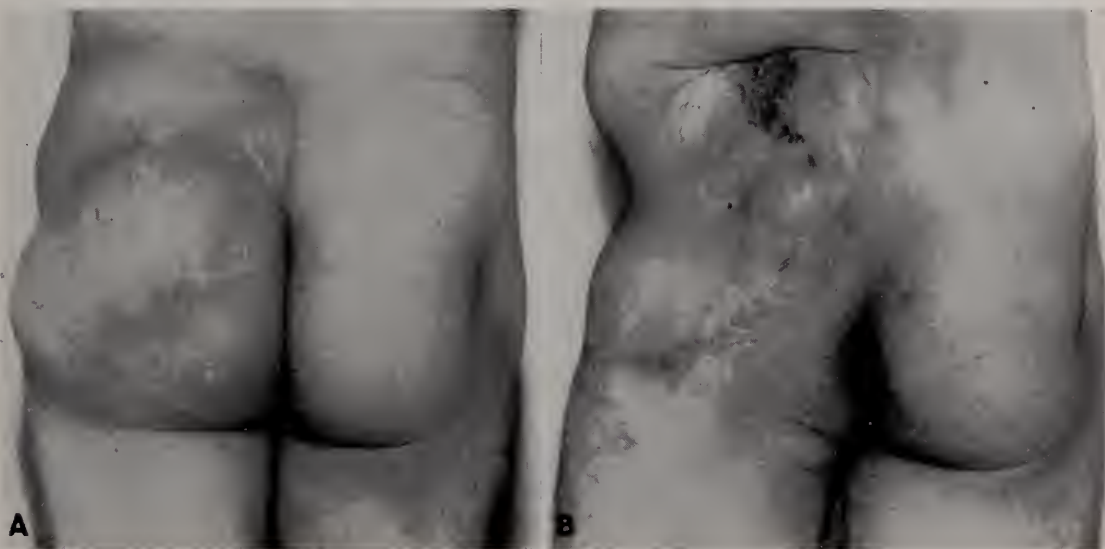


Fig. 3.—J. M. (A) Recurrent myxoliposarcoma of the left buttock following preliminary radiation therapy and prior to surgical resection. (B) Twenty-six months following radical local resection of the left buttock (from Bowden, L., and Booher, R. J., *Surgical Considerations in the Treatment of Sarcoma of the Buttock*, Cancer 6:89-99, 1953).

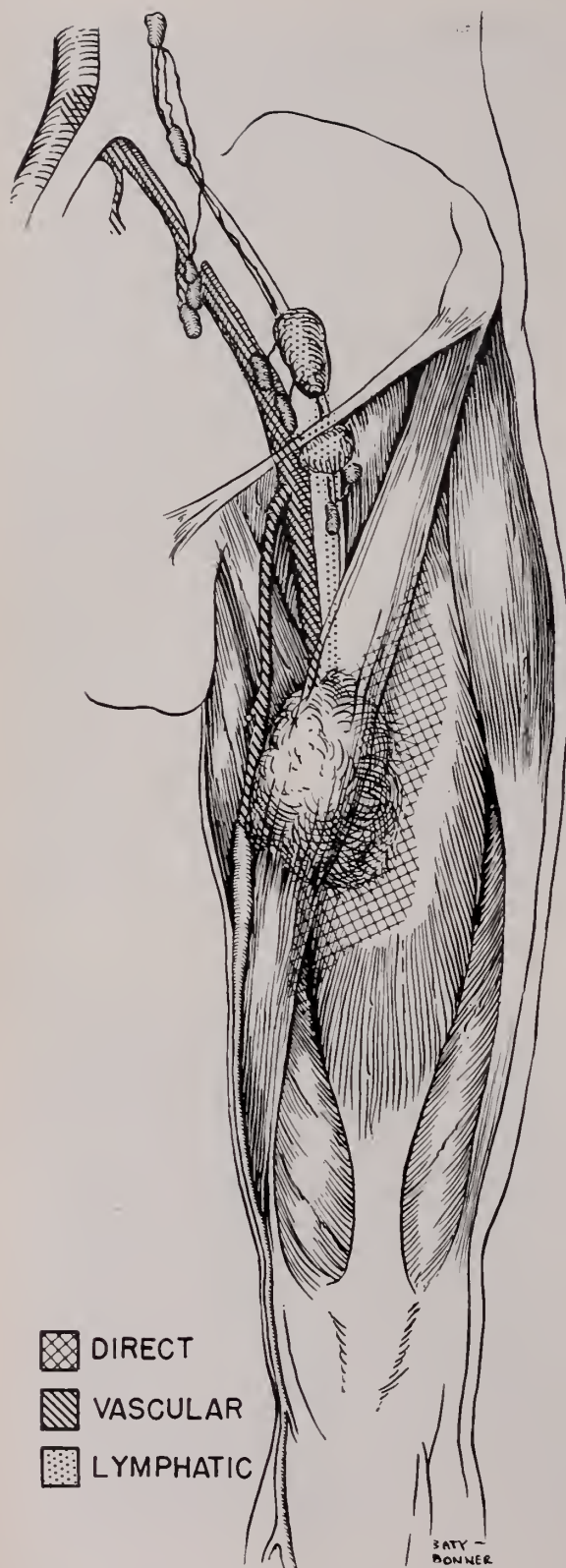


Fig. 4.—Anatomical diagram indicating the three modes of spread of soft tissue sarcoma of the thigh.

sarcoma, synovial sarcoma, angiosarcoma and rhabdomyosarcoma, and are not unknown in fibrosarcoma and in liposarcoma. For this reason, careful examination of regional node areas should be performed in all patients with sarcoma. Regional node removal is routinely accomplished in many disarticulations (e.g. interscapulothoracic amputation, or hemipelvectomy). In more conservative amputations for sarcoma, as well as in extensive local resections for sarcoma, a regional node dissection may well be included as part of the operative procedure. Whether treatment of the primary sarcoma has been by irradiation or by surgery, surgical dissection of the entire node-bearing area is indicated as a rule when regional node metastases subsequently develop (Fig. 1). Roentgentherapy for sarcomatous node metastases in lymphocytoma and neuroblastoma is usually effective, and occasionally effective in node metastases from reticulum-cell sarcoma but is infrequently effective in node metastases from other soft part sarcomas.

When soft part sarcomas spread via the blood stream, there is usually widespread dissemination of tumor and cure is impossible. Nevertheless, solitary pulmonary metastasis does occur with sufficient frequency to be noteworthy. Furthermore, the striking long term survival in some instances following pulmonary resection for solitary sarcomatous metastasis demands aggressive treatment should this complication develop. Seiler<sup>24</sup> and his associates have reviewed a total of 62 reported instances of pulmonary resection for metastatic tumors, of which 18 were done for metastatic sarcoma. Three of these 18 patients were living and well for five or more years, while 7 more were free of cancer for varying periods of less than five years. Stereoscopic chest films, and frequently tomograms of the chest, are required to exclude the presence of other unsuspected metastases before thoracotomy is undertaken for resection of a solitary metastasis (Fig. 5).

*Palliative Treatment:* In treating potentially curable cancer the physician's therapeutic considerations should be confined primarily to the cancer itself, while in treating disseminated incurable cancer his attention should be focussed primarily on the patient as an individual. In applying this rule, it is noteworthy that sometimes the best palliative treatment is actually no treatment at all. Usually, however, palliative treatment includes the maintenance of adequate nutrition, the relief of pain, the

correction of anemia and the bolstering of morale.

In order to accomplish these ends, both palliative surgery and palliative roentgenotherapy must sometimes be employed. Untreated sarcoma frequently invades and ulcerates the overlying skin and, because

patient as a whole and treatment of symptoms as they develop (Fig. 6).

#### RESULTS OF TREATMENT

Of the 717 patients with sarcoma of the soft tissues treated at Memorial Hospital since 1926, there

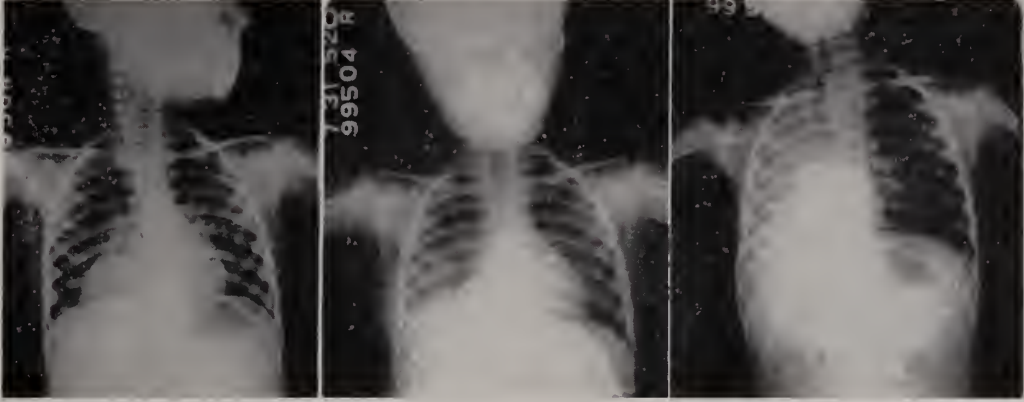


Fig. 5.—L. R. Sequential chest roentgenograms of a 3-year old child surgically treated 11 months previously for a rhabdomyosarcoma of the right buttock. The first film demonstrates a solitary right lower lobe metastasis, the second film the appearance of the chest 7 days following the right lower lobectomy and the third film the appearance of the chest six months later. Although somewhat limited in physical activity because of the marked (and unexplained) mediastinal shift, this child remains free of demonstrable tumor 18 months following her pulmonary resection.

of superimposed infection or because of invasion of sensory nerve trunks, to say nothing of blood and fluid loss from areas of fungation, and offensive odor, palliative surgery or x-ray treatment is definitely indicated. It should again be emphasized that effective palliative treatment requires evaluation of the

is a group of 418 patients who were treated more than five years ago and have been successfully followed since. The over-all five-year salvage rate in this determinate group of 418 individuals is 39.2%.<sup>21</sup> The salvage rate varies markedly with the type of sarcoma treated, ranging from a low of 21.6% in



Fig. 6.—S.G. (A) Chest roentgenogram demonstrating diffuse pulmonary metastases of fibrosarcoma in a patient with hemoptysis and progressive dyspnea. (B) Appearance of chest after 5 weeks of palliative roentgenotherapy, showing marked regression of metastases. This was hardly expected in a characteristically radio-resistant tumor! Effective palliation was thus afforded the patient for almost 6 months.



synovial sarcoma<sup>14</sup> to a high of 69.2% in dermatofibrosarcoma protuberans.<sup>16</sup>

If an over-all five-year salvage of 39.2% can be obtained by accurate and aggressive treatment of soft part sarcomas, it behooves every practitioner to see that such therapy is afforded the occasional patient whom he encounters with this type of tumor.

#### SUMMARY

Sarcomas of soft tissue origin are relatively uncommon but are not difficult to diagnose and are often rewarding to treat. A high degree of suspicion that a painless soft tissue mass of uncertain outline and unusual consistency may be a sarcoma is the key to prompt diagnosis. Biopsy must be performed to prove the diagnosis.

Treatment of soft part sarcomas must be accurate, aggressive and adequate. Either surgery or irradiation, or a combination of these two, may be the treatment method employed, depending upon the histogenesis, location and extent of the lesion.

In the Memorial Hospital experience with more than 700 cases of soft part sarcoma, 418 patients were treated five or more years ago, providing a sizable group of patients on which to base end-result figures. One hundred sixty-four of these patients remained free of tumor for five or more years, giving an over-all salvage of 39.2%.

#### REFERENCES

- Alexander, J., and Haight, C.: Pulmonary Resection for Solitary Metastatic Sarcomas and Carcinomas, *S. G. & O.*, **85**:129-146, 1947.
- Bowden, L., and Booher, R. J.: Surgical Considerations in the Treatment of Sarcoma of the Buttock, *Cancer*, **6**:89-99, 1953.
- Bowden, L.: Management of the Patient with Advanced Cancer: Surgical Aspects, *Conn. State J. Med.*, (in press).
- Cade, S.: Soft Tissue Tumours: Their Natural History and Treatment, *Proc. Roy. Soc. Med.*, **44**:19-36, 1951.
- Cancer Morbidity Series. Federal Security Agency. Public Health Service. Publication #13, 1950.
- Ibid.* Publication #65, 1951.
- Ibid.* Publication #67, 1951.
- Childs, P.: Rhabdomyosarcoma of Skeletal Muscle, *Brit. J. Surg.*, **37**:230-234, 1949.
- Dorn, H. F.: Illness from Cancer in the United States, *Pub. Health Reports*, **59**:33-48, 65-77, 97-115, 1944.
- Haagensen, C. D., and Stout, A. P.: Synovial Sarcoma, *Ann. Surg.*, **120**:826-842, 1944.
- Jenkins, H. P., and Delaney, P. A.: Benign Angiomatous Tumours of Skeletal Muscles, *S. G. & O.*, **55**:464-480, 1932.
- MacDonald, E. J.: The Present Incidence and Survival Picture in Cancer and the Promise of Improved Prognosis, *Bull. Am. Coll. Surg.*, June, 1948.
- McCarthy, W. D., and Pack, G. T.: Malignant Blood Vessel Tumors: A Report of 56 Cases of Angiosarcoma and Kaposi's Sarcoma, *S. G. & O.*, **91**:465-482, 1950.
- Pack, G. T., and Ariel, I. M.: Synovial Sarcoma (Malignant Synovioma): A Report of 60 Cases, *Surgery*, **28**:1047-1084, 1950.
- Pack, G. T., and Miller, T. R.: Combined Radiation Therapy and Surgical Treatment of Technically Inoperable Cancer, *Radiology*, **57**:529-535, 1951.
- Pack, G. T., and Tabah, E. J.: Dermatofibrosarcoma Protuberans: A Report of 39 Cases, *Arch. Surg.*, **62**:391-411, 1951.
- Pack, G. T., Horning, E. D., and Ariel, I. M.: Neuroblastoma (Sympathicoblastoma) with an Analysis of 14 Cases and a Survey of the Literature, *J. Neuropath. & Exp. Neurol.*, **11**:235-256, 1952.
- Pack, G. T., and Ariel, I. M.: Fibrosarcoma of the Soft Somatic Tissues: A Clinical and Pathological Study, *Surgery*, **31**:443-478, 1952.
- Pack, G. T., and Eberhart, W.: Rhabdomyosarcoma of Skeletal Muscle: Report of 100 Cases, *Surgery*, **32**:1023-1064, 1952.
- Pack, G. T., and Pierson, J. C.: Liposarcoma, *Surgery*, (in press).
- Pack, G. T.: End Results in the Treatment of Sarcomata of the Soft Somatic Tissues, *J. Bone and Joint Surg.*, (in press).
- Phillips, R.: Neuroblastoma, *Ann. Roy. Coll. Surg. of Eng.*, **12**:29-48, 1953.
- Segond, P.: Le Cancer et les Accidents du Travail. Assoc. franc de chir. Proc-verb., mcm. et disc., **20**:745-782, 1907.
- Seiler, H. H., Clagett, O. T., and McDonald, J. R.: Pulmonary Resection for Metastatic Malignant Lesions, *J. Thor. Surg.*, **19**:655-679, 1950.
- Stout, A. P.: Liposarcoma—Malignant Tumor of Lipoblasts, *Ann. Surg.*, **119**:86-107, 1944.
- Stout, A. P.: Rhabdomyosarcoma of Skeletal Muscle, *Ann. Surg.*, **123**:447-472, 1946.
- Stout, A. P.: Sarcomas of Soft Parts, *J. Missouri M.A.*, **44**:329-334, 1947.
- Stout, A. P.: Fibrosarcoma: the Malignant Tumor of Fibroblasts, *Cancer*, **1**:30-63, 1948.
- Stout, A. P., and Ariel, I. M.: Panel on Soft Part Tumors, *Proc. Nat. Cancer Conference*, 1949, pp. 206-216.
- Stout, A. P.: Pathology and Classification of Tumors of the Soft Tissues, *Am. J. Roentgen.*, **66**:903-909, 1951.
- Vieta, J. O., and Pack, G. T.: Malignant Neurilemmas of Peripheral Nerves, *Am. J. Surg.*, **82**:416-431, 1951.
- Warren, S., and Sommer, G. N. J., Jr.: Fibrosarcoma of the Soft Parts with Special Reference to Recurrence and Metastasis, *Arch. Surg.*, **33**:425-450, 1936.
- Wetherell, F. S.: Variables in Attainment of 5-Year Cancer Cures, *Bull. Am. Coll. Surg.*, Oct., 1948.

## HEMOLYTIC DISEASE OF THE NEWBORN

MARIAN WALLER, M.S.,  
and  
ALBERT M. EDMONDS, M.D.  
Richmond, Virginia

Although a vast amount of literature has appeared on the problem of isosensitization and hemolytic disease of the newborn, the general practitioner does not have the time to acquaint himself with all of the varied genetic, laboratory and clinical aspects of the problem. Presented here are a few guideposts that may help in diagnosis and treatment.

*From the obstetrical point of view*, it is of interest to note that, although less than 5% of Rh negative women are immunized by pregnancy alone, this figure rises to 50% when there is a history of incompatible Rh blood transfusion. The antigen of greatest clinical importance is the D antigen (the original Rh factor). Anti-D alone or in combination with other antibodies is found in the maternal serum in over 98% of cases of hemolytic disease of the newborn. However, Rh iso-immunization of the mother is not necessarily synonymous with hemolytic disease in the offspring as the maternal antibodies may be due to a previous pregnancy or transfusion and the child may be Rh negative and as such completely unaffected by the maternal antibodies or the titer of the antibodies may not have reached a level where they can produce the clinical picture of the disease. There is a tendency, nevertheless, for the disease to become progressively more severe in succeeding pregnancies and, where a hydropic infant has been born and the father is known to be homozygous, there is little chance to salvage any future children from this mating.

Unfortunately at the present time, there is no sure means of preventing or even depressing antibody production by the mother. At one time, the early induction of labor in immunized mothers, in order to remove the children from its unfavorable environment, was considered the best means of insuring a living child. However, the final outcome depends to a large extent on the capacity of the liver to deal with the products of hemolysis and the premature child has a much reduced capacity to handle this problem than does the full term child. Furthermore, it has been demonstrated that the incidence of kernicterus is higher in the premature infant than in the full term infant.

Procedures that may prove of benefit to the infant are: (1) all pregnant women should be Rh typed at the time of the first examination and, if Rh negative, complete antibody studies should be carried out. Depending on the parity of the patient and the history of previous transfusions, antibody studies should be done at frequent intervals thereafter; (2) if an exchange transfusion is anticipated, rapid clamping of the cord should be done so that very little of the placental blood is pumped over into the infant's circulation; (3) analgesics for the mother should be used sparingly so that anoxia in the child may be reduced to a minimum, and (4) probably of most importance, that close cooperation should be established with the pediatrician so that suitable therapy may be instituted rapidly. An exchange transfusion soon after birth may prove to be life-saving.

*From the pediatric point of view* the diagnosis of hemolytic disease may present some difficulties, especially where adequate laboratory facilities are not available. In instances where the development of hemolytic disease of the newborn can be anticipated, the premature infant especially should receive the benefit of prompt therapy.

The need for therapy and the type of therapy to be instituted depends upon a number of factors and these will be considered in the following order:

1. Duration and height of maternal antibody titer.
2. History of previous hemolytic disease and homo or heterozygosity of the father.
3. Prematurity.
4. Laboratory findings on the infant:  
Coomb's test  
cord hemoglobin  
serum bilirubin  
reticulocytosis and erythroblastemia.
5. The exchange transfusion.

1. Although one cannot predict the degree of the hemolytic process in the infant from the maternal antibody titer alone, a titer of 1:32 or higher, especially when the antibodies are of the incomplete or blocking variety, usually results in some degree of sensitization of the infant's cells. If a high titer

of antibodies has persisted throughout the pregnancy, the infant is apt to be more severely affected than if the antibodies first appeared in the last trimester.

2. Hemolytic disease usually becomes progressively more severe in subsequent pregnancies although this is not always the case. However, if the mother has already given birth to an affected infant, the outcome of future pregnancies will depend upon the genetic make-up of the father. If the father is homozygous, all of the children will be Rh positive and subject to the hemolytic process, whereas, if he is heterozygous, there is a 50-50 chance of the child being Rh negative and therefore unaffected.

3. Premature infants are in need of more prompt and intensive transfusion therapy because of their lesser ability to handle the products of hemolysis and because of their greater susceptibility to kernicterus.

4. Laboratory findings on the infant will often permit the institution of suitable therapy long before the clinical signs of anemia and jaundice become apparent. Early therapy is especially important in the prevention of kernicterus or the neurological sequelae that may follow hemolytic disease of the newborn.

The Coomb's test: Coomb's serum is an anti-globulin serum that brings about the clumping of red blood cells that have antibody globulin attached to them. The antibody need not be anti-Rh in specificity. The Coomb's test is one of the most useful tests for the diagnosis of hemolytic disease of the newborn. It can be performed on as little as one drop of whole blood and in as short a time as 5 minutes. A positive Coomb's test indicates sensitization of the infant's cells with maternal antibody and such cells are labelled for destruction. On occasion, an Rh positive infant may type falsely as Rh negative due to the blocking action of the maternal antibodies on the infant's cells; however, in the presence of a positive Coomb's test the true situation is apparent. Hemolytic disease rarely occurs in the absence of a positive Coomb's test. Although the test will decide whether or not the child's cells are coated with antibody, it will not in itself indicate the degree of the hemolytic process nor prognosticate the future course of the disease.

The cord hemoglobin: Many workers have found that the cord hemoglobin level is very closely related to the infant's chance for survival and that it is the best index for deciding on the type of therapy, i.e.,

simple transfusion or the exchange transfusion. A 68% mortality has been demonstrated for infants whose cord hemoglobins were under 10.0 Gms.%. Exchange transfusions are advocated for all infants whose cord hemoglobins are below 13.0 Gm.%. This criterion will not hold true for hemoglobins performed on peripheral blood, since such values tend to be higher. Infants whose cords are tied early will show a lower venous hemoglobin concentration than infants whose cords are tied late.

The serum bilirubin level: There also appears to be a correlation between the cord bilirubin level and the chance for survival and incidence of kernicterus. Mollison reported a 52% mortality when the level of the cord bilirubin exceeded 4.0 mg.%. The bilirubin level at birth is not a good index for treatment, as treatment should be instituted long before the peak of the bilirubin level is reached many hours after birth. Hsia and associates studied the bilirubin levels in infants at birth and after exchange transfusions, and they stressed the need for keeping a close check on the serum bilirubin. It is their opinion that kernicterus can be prevented if the level of the bilirubin is kept below 20.0 mg.%. Multiple exchange transfusions are recommended, if necessary, to maintain bilirubin level below 20.0 mg.%.

Reticulocytosis and erythroblastemia: In infants showing hemoglobin levels in the normal range, the reticulocyte and erythroblast level may help in foretelling increased blood destruction. If the cord hemoglobin is 15.0 Gms.% or more, the reticulocyte count normal (less than 5%), and the erythroblast count normal (less than 10 per 100 white cells) the infant is almost sure to recover without treatment.

5. The use of exchange transfusion has reduced the mortality due to hemolytic disease and has lowered the incidence of kernicterus in the surviving infants. Criteria for the exchange transfusion, based on an extensive series of cases, have been established by Allen and associates.

(a) Any infant showing hepatosplenomegaly, edema or anemia (less than 4.5 million R.B.C.)

(b) Exchange at any time when the infant's serum bilirubin level exceeds 20.0 mg.%, using multiple exchanges if necessary. However, an exchange transfusion will be most effective if done within the first 24 hours after birth.

(c) Exchange if other findings are equivocal and the child is premature.



(d) Exchange if there is a history of hemolytic disease in the family and especially if the infant is a male. Allen reported an incidence of 8.9% kernicterus in females and 17.8% in males.

In addition to the above criteria, if the mother's titer is 1:32 or higher and if the baby has a positive Coomb's test and its cord hemoglobin level is below 13 Grams, an exchange transfusion is generally advisable.

The obstetrician who has done antibody tests on his patient during pregnancy will be in a position to arrange for a prompt exchange transfusion immediately after delivery. Ideally, blood should be obtained from the mother prior to delivery and cross matched with a compatible donor. In this way suitable blood for exchange transfusion will be made available at the time of delivery.

In those rare instances in which an antibody is encountered with a high incidence of positive reactions, additional time will be available for the blood bank to find a compatible donor.

#### TECHNIQUE OF THE EXCHANGE TRANSFUSION

If one exchanges 500 cc. of blood, a removal of about 95% of the Rh positive blood can be accomplished. The positive Coomb's test will also generally be reversed.

Regardless of the method of exchange, the following precautions should be taken:

1. Fresh Rh negative blood must be obtained—the best test for compatibility of the blood is a cross match between the donor's cells and mother's serum.
2. Baby kept warm during procedure and the blood brought to room temperature to prevent chilling.
3. Aseptic technique used at all times—operating room helpful.
4. Heparin, .1 cc., given I.V. with each 100 cc. of blood to prevent blood clotting.
5. 10% calcium gluconate, 1 cc., given I.V. per 100 cc. of blood because of the citrate in blood predisposing to tetany.
6. Vitamin K should be given following the exchange to restore blood clotting to normal.
7. Prophylactic penicillin is also given 24-48 hours following exchange.

Exchange transfusion is generally accomplished by one of the following methods:

1. Umbilical vein technique

2. Great saphenous vein technique

3. Radial artery—saphenous vein technique.

The umbilical vein technique can be carried out for about 24-48 hours after birth. The other techniques can be carried out at any time following delivery.

Umbilical vein catheterization with polyethylene tubing was first introduced by Diamond in 1947. As large a polyethylene tube as possible is introduced into the stump of the umbilical cord which in turn enters the portal vein. The umbilical vein is the largest vessel present in the umbilical stump. Because of the tortuosity of the umbilical vein it is at times helpful to cut the umbilical cord down close to the skin level. The actual catheterization of the vein can sometimes be accomplished easily and at other times can be difficult, depending on the tortuosity of the vessel. A three-way stop cock is attached to the polyethylene tube and the other two connections attached to the blood for transfusion and the other to a 20 cc. syringe. By manipulating the three-way stop-cock, blood can be injected and withdrawn through the polyethylene tube. The hazards of the umbilical vein technique are air embolism, perforation of the umbilical vein or portal vein, sepsis, overloading of the circulation and tetany.

Bukot, Arnold and Alford in 1948 recommended cutting down on the great saphenous vein and introducing polyethylene tube by this route into the inferior vena cava. The authors have not had any experience with this method. One objection to this method is the difficulty of keeping the operative field clean so near the perineum.

Weiner and Waxler in 1946 suggested that exchange transfusions can be readily accomplished by injecting blood through a cut-down of the superficial saphenous vein and blood withdrawn simultaneously from the radial artery which has been exposed and cut. Cut-downs on the saphenous vein are a more or less simple procedure and are done frequently by most people interested in pediatrics. The location of the radial artery may be more difficult particularly when one remembers that the ulnar and median nerves are located close by. When in doubt, if one will cut the suspected artery lengthwise no harm can occur if the nerve is accidentally cut in this manner. If bleeding occurs, one has located the artery. Before the bleeding is begun one should be sure that the prompt introduction of blood through the other

cut-down can be accomplished.

The disadvantages of this technique are two skin wounds, one of which is an artery which generally must be sacrificed. No difficulty with the circulation to the hand has been experienced by the authors although the possibility is always anticipated. The method of continuous substitution is not as efficient as intermittent substitution and, therefore, larger quantities of blood must be exchanged.

If the baby is very anemic, blood should first be injected and the introduction of blood maintained at about 50-75 cc. ahead of the withdrawal. If there is any question of the baby being near cardiac failure, about the same amount of blood should first be withdrawn and this relationship maintained until the baby is out of cardiac failure. Once the procedure is going smoothly, a fairly rapid exchange can be accomplished.

Exchange transfusions are most successfully carried out by a trained, well equipped team. When adequate facilities for such treatment are not avail-

able locally and preparation cannot be made for delivery of the infant elsewhere, simple transfusion is usually performed; however, this will only be effective for milder forms of the disease.

The treatment of infants with hemolytic disease due to iso-immunization against the rarer blood group antigens will require the help of a blood group research laboratory so that suitable blood can be procured.

#### REFERENCES

- Allen, F. H., Jr., Diamond, L. K., and Vaughan, V. C., III: Erythroblastosis Fetalis VI. Prevention of Kernicterus. *Am. J. Dis. Child.* **80**: 779-791, 1950.
- Hsia, D. Y., Allen, F. H., Gellis, S. S., and Diamond, L. K.: Erythroblastosis Fetalis VIII. Studies of Serum Bilirubin in Relation to Kernicterus. *N.E.J. Med.*, **247**: 668-671 (Oct. 30) 1952.
- Mollison, P. L.: *Blood Transfusion in Clinical Medicine*, 1951, Thomas, C. C., Blackwell.
- Pickles, M. M.: *Hemolytic Disease of the Newborn*. Thomas, C. C., 1949, Springfield, Ill.
- 1805 Monument Avenue.

### "Cancer Cure" Found to Be Only Cough Medicine.

The American Medical Association's Bureau of Investigation reported recently that the only "pharmacologically active" ingredient in the so-called Hoxsey "cancer tonic" is a drug used mainly in cough medicine.

The bureau observed in the June 12th Journal of the American Medical Association that it sees no reason for the A.M.A. to further investigate the remedy. It points out that the federal government has obtained an injunction against shipment of the material in interstate commerce as a cancer medicine.

Any person with "a modicum of knowledge" of drugs knows that the medicine "is without any therapeutic merit in the treatment of cancer."

"Any such person who would seriously contend that scientific medicine is under any obligation to investigate such a mixture or its promoter is either stupid or dishonest.

"There is indication that certain persons, includ-

ing a Pennsylvania state senator and several physicians, magazine editors, and newspaper editors, have sought to create in the minds of the public an idea that organized medicine, particularly the American Medical Association, will not give Mr. [Harry] Hoxsey an opportunity to demonstrate his claimed cancer cure before the world, because it refuses to send representatives to Dallas, Texas, to investigate.

"It is fair to observe that the American Medical Association or any other association or individual has no need to go beyond the Hoxsey label to be convinced," the bureau stated.

"Under the circumstances, the whole picture would be extremely ludicrous except for the appeal to the credulous and unreasoning, which can conceivably result in unnecessary injury, damage, and death to many persons, not from an overdose of the Hoxsey tonic, but by reason of their relying on it instead of on proper, established procedures until their condition has progressed so far that they cannot be cured."

## TRICHOBEZOAR—A Case Report

WILLIAM F. BARRY, JR., M.D.,  
Associate Radiologist, Chesapeake & Ohio Railroad Hospital,  
Clifton Forge, Virginia

Probably the best known of the rarer pathological entities in medicine are the bezoars. Every medical student knows what they look like. Yet, bezoars are relatively rare.

In 1939, DeBakey and Ochsner<sup>2</sup> reviewed the entire world literature on the subject and found only 303 reported cases. They added 8 cases from their own clinic, bringing the total to 311 cases. In 1950 Tondreau and Kirklin<sup>9</sup> again reviewed the literature and added 23 cases from the files of Mayo Clinic. They stated that there has been a total of about 400 reported cases. Since that time, sporadic cases have been reported<sup>5,6</sup>. There has not been a reported case in the *Virginia Medical Monthly* in the past fifteen years. Feldman<sup>4</sup> states that "in over 30,000 gastro-intestinal roentgen studies, not a single instance of this condition was observed".

The bezoars have been divided into five main groups. Trichobezoars are composed of hair of varying length, matted together. Phytobezoars are composed of vegetable fibers and matter. The persimmon ball is probably the most common of this group and is caused by eating the unripe fruit of *Diospyros virginiana*, the wild persimmon. Trichophytobezoars are combinations of the two. Mineral bezoars are produced by the ingestion of such substances as mica, wood, and paraffin. The "shellac" bezoar<sup>7</sup> is produced by the ingestion of wood polishes, shellac and varnishes for their alcoholic content.

DeBakey and Ochsner found their 311 cases to be divided as follows:

Trichobezoars .....	172 (55.3%)
Phytobezoars .....	126 (40.4%)
Persimmon .....	29.5%
Other foods .....	10.9%
Mineral & Shellac Bezoars .....	13 (4.3%)

Of these bezoars, 4.1% were classified as concretions.

The need for accurate and early diagnosis is apparent when one reviews the symptoms produced by trichobezoars, for they are the symptoms of many common gastro-intestinal disorders (see Fig. 1).

This case is being submitted with the permission of Maurice M. Fliess, M.D., Chief of Pediatric Section of the C. & O. Hospital, the physician in charge of the patient.

However, the complications of this entity are rather serious. Untreated, they lead to inanition, obstruction of pylorus or small intestine, and perforation. Levy and Smith<sup>8</sup> collected six instances of perforation of stomachs containing trichobezoars. The incidence of associated gastric ulcers has varied from a low of 9%, as reported by Levy and Smith,<sup>8</sup> to as high as 24.4%, as reported by DeBakey and Ochsner.<sup>2</sup> The overall mortality from exploratory gastrotomy and removal of the trichobezoar is approximately 4%, while the mortality in unoperated cases is about 75%.

FIG. 1

Upper abdominal mass .....	87.8%
Abdominal pain .....	70.2%
Nausea and vomiting .....	64.9%
Weakness and weight loss .....	38.1%
Constipation and diarrhea .....	32.0%

In analyzing a collected series, Fox and Stiles<sup>5</sup> felt that there was an underlying personality disorder manifested frequently by habitual actions such as nail biting or hair chewing. However, as shown by others, the personality disorder frequently cannot always be found, and there is a reported case of a woman who underwent five gastrotomies for the removal of recurrent hair balls.

The diagnosis of bezoar is relatively simple since the advent of roentgenology, especially fluoroscopic examination. Bezoars as small as 2 to 3 cms. in size have been reported. The X-ray findings are quite typical and have been described by various authors: Feldman,<sup>4</sup> Inlow,<sup>7</sup> Tondreau and Kirklin.<sup>9</sup> To quote DeBakey and Ochsner, "At present, with the most ubiquitous use of roentgenography, the lack of a correct pre-operative diagnosis is indicative of misfeasance on the part of the physician".

The diagnosis is usually not suspected on a plain film of the abdomen. However, upon swallowing a barium mixture, a space filling defect is noted within the stomach. This mass usually can be displaced within the stomach. The barium is seen to flow in channels between the surface of the mass and the stomach wall. The most characteristic picture is seen after most of the barium has left the stomach,



The barium can then be seen to occupy the small spaces between the hair.

Our interest in this subject was stimulated by a recent case of a seventeen month old Negro female, admitted to the Pediatric Service of the Chesapeake and Ohio Hospital. The little girl had had intermittent episodes of nausea, vomiting and abdominal pain for several months. She had been slow to gain weight. Physical examination revealed a small, poorly nourished child with short, kinky hair and patches of alopecia.

The laboratory findings demonstrated only a slight anemia HBG 10 gms. RBC 3,950,000), and a slight leukocytosis of 12,950 with 69% lymphocytes.

Radiological examination was not fully satisfactory as the child would not stand erect. The examination was performed in the recumbent position. On swallowing, barium was seen to flow around an intraluminal mass which, on palpation, did not appear to be a part of the stomach although it occupied most of the stomach (Fig. 2). With palpation,



Fig. 2. AP Projection of stomach after first swallow of barium mixture.

barium could be seen to move in channels about this mass. There was an initial delay in gastric emptying. However, when the duodenum was visualized, an extension of the mass was seen in the

first portion of the duodenum (Fig. 3). A film taken approximately twenty-four hours after ingestion shows the mottled pattern of barium in the inter-

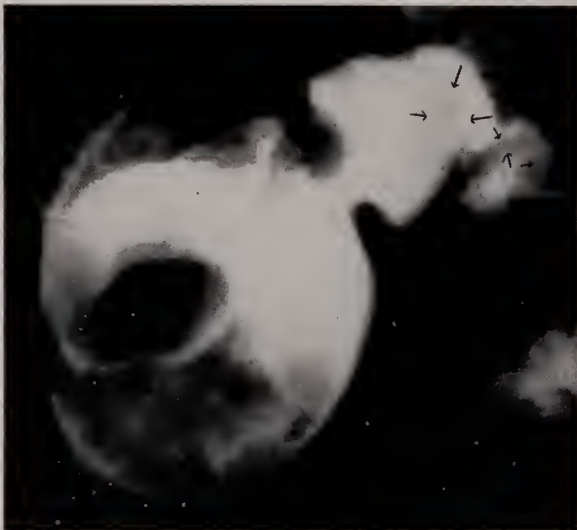


Fig. 3. Right Anterior Recumbent Oblique Projection showing duodenal bulb and part of the arc. A filling defect can be faintly made out.

spaces of the hair (Fig. 4).

On February 1, 1954, a large trichobezoar was

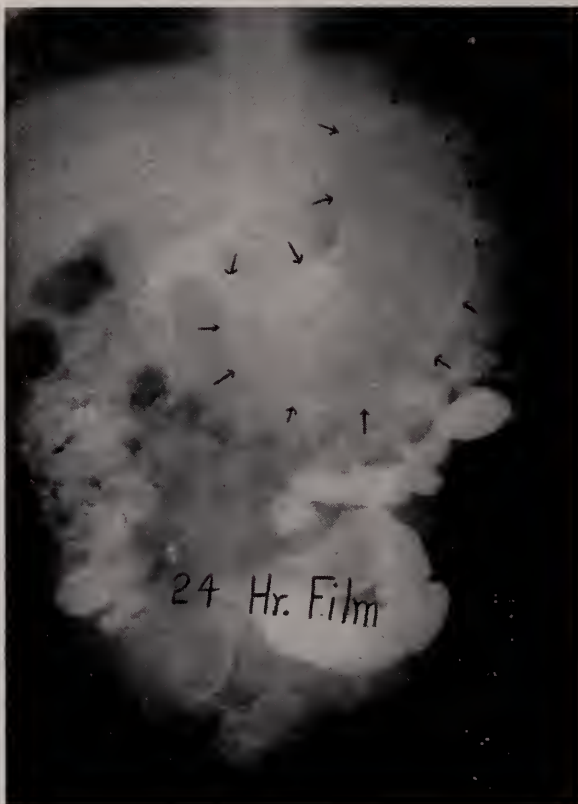


Fig. 4. 24 hr. film showing mottled pattern of barium in stomach.

removed at operation.

The specimen was a solid, cylinder shaped mass with tapered ends, measuring 8 cms., in length and 3.5 cms. in diameter. It was roughly the shape of a stomach and there was an extension from the distal end which assumed the shape of the first portion of

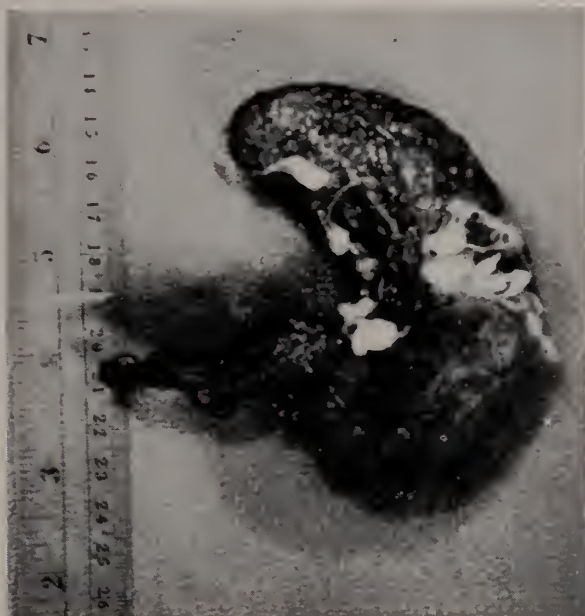


Fig. 5. Photograph of the gross specimen removed by surgery.

the duodenum. The mass had a fecal odor, was black, and composed of matted hair, string and bits of cellophane (Fig. 5).

#### SUMMARY

A case of trichobezoar has been reported with a short review of the relative frequency and the radiological findings for establishing a pre-operative diagnosis.

#### BIBLIOGRAPHY

1. Caffey, John: *Pediatric X-Ray Diagnosis*, Yearbook Publ., Inc., 2nd Ed., 1950.
2. DeBakey, M., and Ochsner, A.: Bezoars and Concretions, *Surgery*, **4**:934, 1938; *Surgery*, **5**: 132, 1939.
3. Eberhard, W., and Pack, G. T.: Bezoars: A Report of 3 Cases, *Rev. Gastro.*, **17**: 235, (April) 1950.
4. Feldman, Maurice: *Clinical Roentgenology of Digestive Tract*, Williams & Wilkins Co., 3rd Ed., pp. 288, 1948.
5. Fox, M. J., and Stiles, F. C.: Trichobezoar, *A.M.A.J. Dis. Child.*, **82**: 717, (December) 1951.
6. Hurwitz, S., and McAllenney, P. F.: Trichobezoar in Children, *A.M.A.J. Dis. Child.*, **81**: 753 (June) 1951.
7. Inlow, H. H.: Shellac Bezoars, *Rad.*, **34**: 618, 1940.
8. Levy, J. S., and Smith, R. T.: Bezoars, *Am. J. Dig. Dis. & Nut.*, **9**: 198, 1942.
9. Tondreau, R. L., and Kirklin, B. R.: Bezoars of the Stomach, *Surg. Clin. N. Amer.*, pp. 1097, (August) 1950.

#### T.B. and the General Practitioner.

It seems apparent that the general practitioner is going to be involved in the actual treatment of the tuberculosis patient to a much greater extent than he has in the recent past and fewer patients will be treated by specialists in chest diseases. Another factor acting in the same direction is the relatively shorter time that the average patient will spend in a hospital and the fact that such hospitalization is less likely to be in a remote institution. The family physician, therefore, will be less likely to lose supervision of his patient. This trend requires a change in the nature and emphasis of postgraduate medical conferences and courses of instruction, which must be directed more toward the general practitioner. James E. Perkins, M.D., *NTA Bulletin*, May, 1954.

#### Long-Acting Penicillin.

Tests on patients with infections from burns, compound fractures and surgery show one shot of a new long-acting penicillin can replace multiple injections of penicillin.

Dr. John R. Hankins and George H. Yeager, University Hospital department of surgery, Baltimore, said the one-shot treatment controlled infection in all 46 patients tested, more of whom would ordinarily have required several doses of other penicillin types.

Benzathine penicillin G has already been found useful for treating infections accompanying rheumatic fever, for children with streptococcal infections, and for gonorrhea, the physicians said in the August 7th *Journal of the American Medical Association*.

**CLINICOPATHOLOGICAL CONFERENCES**  
of  
**The Medical College of Virginia Hospital**

Prepared and Edited by  
GORDON HENNIGAR, M.D.\*  
WM. R. KAY, M.D.\*\*

**CASE #102**

A 9 month old white male infant was first admitted to the Medical College of Virginia Hospital on March 20, 1952. He had been thought to have had more than the usual number of colds during the winter, but these were not associated with cough or croup. For about one month the parents had noted that the child made a soft grunting noise on expiration. The grunt would disappear when the child was asleep and often was not noticeable when the child was occupied with toys, etc. There was no history of fever, cough, or other symptoms.

The past history was not remarkable. His birth weight was 6 lbs., 13 oz. He was breast fed for four weeks and then put on an evaporated milk formula. Orange juice and percomorphum were begun at three weeks with other foods at the usual ages. He teethed at six months, sat up at six months, and was pulling up at the time of admission. There had been no recent exposure to infectious diseases. The family history was negative.

Physical Examination: Temperature 99.6. Pulse 120. Respiration 26. Weight 16 lbs., 13 oz. The patient was well developed and well nourished and in no apparent distress. The fontanelles were open, flat, and of normal size. Eyes, ears, nose, and throat were essentially negative. There were small bilateral cervical nodes. The lungs were clear to percussion and the chest moved normally. There were a few moist rales in both bases posteriorly. The heart sounds were of good quality. The rhythm was regular and there were no murmurs or thrills. The abdomen was negative. The genitalia were normal and no abnormalities were noted in the extremities.

X-ray and fluoroscopy of the chest showed marked enlargement of the heart with a large left auricle which extended backward beyond the vertebral column. The CT ratio was 70%. WBC 12,250 with 99% lymphocytes. A blood smear was reported as looking "more like a reaction than a blood dyscrasia".

\*Associate Professor of Pathology, Medical College of Virginia.

\*\*Assistant Professor of Clinical Medicine, Medical College of Virginia.

The urine was negative. An electrocardiogram showed a rate of 165 with a regular rhythm, a PR interval of .10 and a QS interval of .06. ST and T changes suggested left ventricular strain.

During this hospital stay the temperature ranged from 98 to 100. The patient was discharged after three days with no change in his condition.

The patient was again admitted on April 19, 1952, as an emergency. No interval history is recorded except that the parents had noticed that the baby's lips were blue during the past week. Examination showed a temperature of 102, respiration 76. Breathing was labored, but no cyanosis was noted. No murmurs were noted. The liver was palpable 4 fingers breadth below the costal margin and the spleen was also easily palpable. An electrocardiogram at this time showed marked sinus tachycardia with a left axis shift and x-rays again showed cardiac enlargement with the trachea pushed to the right.

Laboratory Data: Hemoglobin 11.9 grams, WBC 18,850 with 36 polys., 61 lymphs., and 3 moncs. It was felt that the patient was probably in congestive heart failure and he was given 0.4 mgm. of Cedilanid intravenously. He did not respond, however, and expired several minutes later. An autopsy was obtained.

**CLINICAL DISCUSSION BY DR. GAYLE G. ARNOLD\***

In the first two paragraphs we have all that is available as to the present illness, past history and family history on this baby. "He had been thought to have had more than the usual number of colds during the winter". Very frequently a story such as this is due to the fact that there are several school age siblings who bring home to the infant every two or three weeks a new respiratory infection acquired at school. We do not have available any note as to whether any specific antibiotic or chemotherapy was ever needed, but I believe it is fair to assume these were mild colds, since it is stated that there was no cough or croup. Pharyngeal, tonsillar, or otic infec-

\*Instructor in Pediatrics, Medical College of Virginia.



tions are very common complications of a cold in this age group.

The actual present illness began in February, when it was noted that the baby made a soft grunting noise on expiration, but this was intermittent and was less noticeable when he was occupied with toys, or when he was asleep. Classically, grunting expirations are associated with respiratory embarrassment and very commonly indicate a pneumonic process. There is no fever or cough, however, and the respiratory embarrassment must be of a different sort in this baby.

"The past history was not remarkable." To this statement I would like to add that it is also not helpful to me. I must consider the growth and development, feeding history and family history as negative.

At this time the baby was admitted to MCV for a three-day period. The original physical reveals a normal temperature and slightly rapid pulse and respirations. The weight of 16 pounds 13 ounces at first seems adequate for a 9 month old child, and the casual rules of doubling the birth weight by 5-6 months has been met. However, I do feel that a weight of 16-13 at 9 months is below what one might expect in over 50% of children, and whether or not this is significant in this case would depend on hereditarily determined stature and medical evaluation. It would be much more helpful to know monthly weights and lengths, to see if with the present illness there were an abrupt change toward slowed growth.

The baby is described, however, as well developed and well nourished. Examination of the head, eyes, ears, nose and throat contributes only small bilateral cervical nodes. These are very common in infants with slight subcutaneous tissues, and with a history of frequent colds, I cannot become very excited about them. "The lungs were clear to percussion and the chest moved normally. There were a few moist rales in both bases posteriorly." We will return to this finding. The heart sounds were of good quality. The rhythm was regular and there were no murmurs or thrills. The abdomen was negative. The genitalia and extremities were normal.

Physical examination aids us very little in accounting for the symptoms listed in the chief complaint, except that moist rales were heard at the bases, bilaterally, and it is encouraging to elicit one posi-

tive physical finding in the system in which we are looking for pathology, on the basis of the presenting complaints.

Laboratory findings we hope will be more helpful. The white count was 12,250, of which 99% were lymphocytes, and the hematological study of the smear was reported as looking "more like a reaction than a blood dyscrasia." We are not aided by a hemoglobin determination, or red count, on this admission, but a urinalysis was negative.

X-ray and fluoroscopy of the chest certainly show an enlarged heart. The electrocardiogram demonstrates a sinus tachycardia, of regular rhythm, with a PR interval of 0.10 and a QRS time of 0.06. ST and T changes suggested left ventricular strain. The upper normal limit for the PR at this heart rate is about .135 and the QRS is normal. The ST and T changes are not described, but I assume they consist of depressed ST in I, with T inverted or low and elevated ST in lead III, with a leftward deviation of the QRS complex.

The EKG is therefore in complete accord with the x-ray and fluoroscopic findings.

His course in the hospital was short, uneventful and within three days, he was discharged unimproved. Whether or not any treatment was instituted is not mentioned, but I believe I may assume none was carried out.

Four weeks later, the child was admitted as an emergency, with an interval note that the parents had noted the baby's lips to be blue during the past week. He now had a fever of 102°, with extremely rapid respirations, with labored breathing. No cyanosis was noted, but could have been present, depending on the adequacy of the light at the time of examination. Still no murmurs were heard, but the liver was down 4 finger breadths and the spleen was easily felt. The EKG was similar to the previous admission, and x-rays showed progressive cardiac enlargement. We now are given a hemoglobin of 11.9 Gm., 18,850 white blood cells, 36% polymorphonuclears, 61% lymphocytes, 3% monocytes. The baby was given 0.4 mg. Cedilanid IV, but he died several minutes later.

In short summary, then, we have for diagnosis an infant who did well for 8 months, then showed grunting expirations, and in the hospital was found to have a very enlarged heart, with EKG evidence

of strain, went home, and a month later was readmitted as an emergency, showing signs and symptoms of progressive heart failure, and he died rather promptly.

Our problem seems to be disease of the cardiovascular-respiratory systems entirely, and the question for immediate consideration is: Is the disease of congenital or acquired variety?

In a recent study in Toronto children this statement is made—"From birth to 5 years of age, heart disease in children is almost always congenital in origin." Davison states: "Under the age of 3 years the congenital variety is 100 times as frequent as the acquired." Going with the odds for the moment, what evidence is present for congenital heart diseases? First, the age of the patient, 8 months, when symptoms began, would be in favor of a congenital defect. Second, after a three day hospitalization, the baby was discharged home with no particular therapy. I imagine the parents were told: "The baby has a heart defect that he was born with, the heart is enlarged, and he is too young for us to make a definite diagnosis or consider whether any surgical relief can be contemplated."

If a congenital defect is present, what sort are we confined to, with the evidence before us? It must be of (1) the non-cyanotic group, i.e., Septa intact; ductus arteriosus and foramen ovale closed, no admixture of arterial and venous blood and with cyanosis only in the presence of heart failure. There are no murmurs recorded on any physical examination made, and the one hemoglobin determination we have is 11.9 Gms., and does not make one think of even a small arterio-venous shunt (unless compensated by a patent ductus.) Without murmurs to substantiate any of these, we can only conjecture. These findings would tend to rule out coarction also since 19 out of 20 of these will have cyanosis and usually show marked right axis deviation. There is no note as to femoral pulses or blood pressure.

One species of congenital cardiac malformation which is rare deserves our careful consideration. This is endocardial sclerosis. This lesion has been called fetal endocarditis in the past, and the pathogenesis is controversial. As far as I know, an ante mortem diagnosis has never been made. The history in this infant is certainly compatible with endocardial sclerosis, since they show sudden death, with mild or no cyanosis, x-ray evidence of an en-

larged heart and occasionally nondescript murmurs are present.

If the lesion is congenital as the odds favor, and on the basis of all the negative data we are given, I would think this condition is a good possibility.

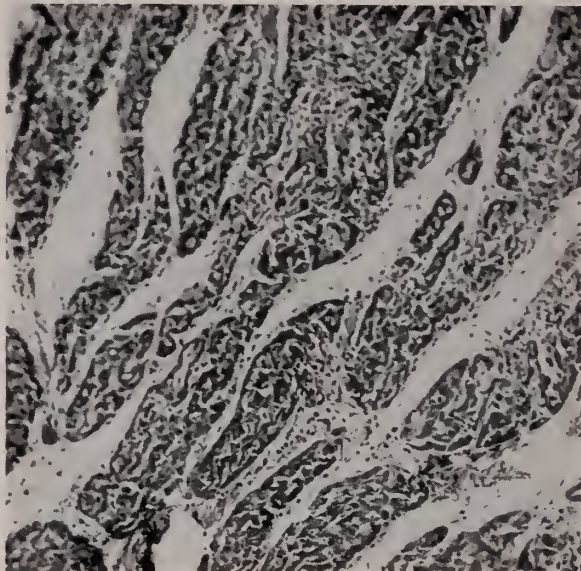


Fig. 1.—Section of the myocardium showing infiltration of round cells.

In clinico-pathological conferences, it is the universal experience not to neglect the one in a hundred possibilities, or the "almost never" conditions. Acquired heart disease in a nine month old child would certainly fall into this grouping.

Diffuse hypertrophy and dilatation of the heart may be secondary to longstanding anemia, syphilis, pertussis, beriberi, pneumonia, bronchitis, diphtheria, von Gierkes disease of the heart, poliomyelitis, and other septic or viral diseases, and may be a nonspecific reaction. It is here that I would accent the lymphocytosis and neutropenia found on the first admission, and it might militate for a viral type of infectious process, at that time or earlier. A number of labels, such as Fiedler's myocarditis, idiopathic myocarditis, and interstitial myocarditis have been used to describe this pathological process. The clinical picture is one of progressive myocardial failure, *unassociated with the usual causes of myocardial damage*. The outstanding symptoms are tachycardia, cardiac enlargement, and often increasing cyanosis. The EKG may reveal changes in the T wave. The course of the disease ordinarily is rapidly and progressively downhill and death may occur suddenly



and unexpectedly. Here again, the diagnosis usually is a pathological one, but there has been a recent increase in the percentage of autopsies which show some myocardial changes. A respiratory infection immediately before the onset of symptoms or weeks before onset is described frequently.

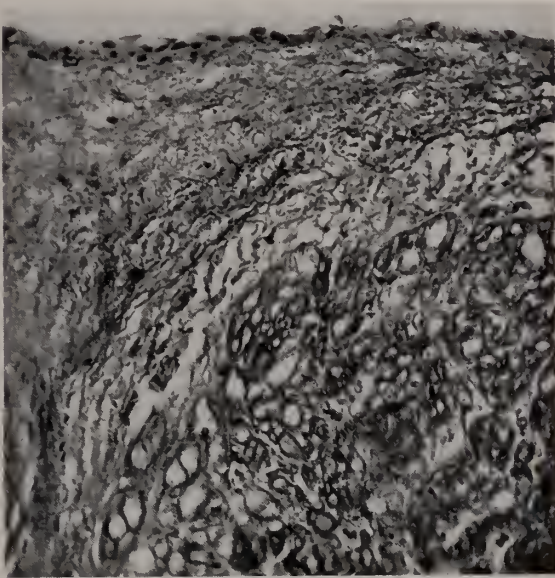


Fig. 2.—Section of heart showing fibrosis of endocardium and vacuolization in subendocardial layer.

I believe that our young patient had such an interstitial myocarditis, following one of his "more frequent" respiratory infections. Within the last week of life, I believe he contracted pneumonia terminally along with progressive cardiac decompensation. Very frequently there is an interstitial pneumonia as a concomitant finding with the myocarditis but his may have been of the terminal type. The leukocytosis, with the at least increasing polymorphonuclears is quite compatible with such an assumption.

In summary then, my diagnosis rests between two disease processes, both rare, both diagnosed by the pathologist after autopsy, both untreatable, one probably congenital: endocardial sclerosis, and one acquired: interstitial myocarditis. I believe I must favor the latter, with a terminal pneumonic process.

DR. ARNOLD'S DIAGNOSIS: Interstitial Myocarditis  
ANATOMICAL DIAGNOSIS: Fiedler's Myocarditis

#### PATHOLOGICAL DISCUSSION BY

DR. GORDON HENNIGAR

The body was that of a well developed and well nourished 10 month old white male infant. The

skin appeared normal. There was no lymphadenopathy. The abdomen was not distended and the liver was easily palpable 5 cm. below the right costal margin. No abnormalities were noted in the extremities. There was 125 cc. of straw colored fluid in the right pleural cavity and 50 cc. in the left pleural cavity. The pericardial cavity contained 400 cc. of similar fluid.

The heart was enlarged and weighed 150 gms. (normal 39 gms.) The left ventricle was markedly dilated and hypertrophied with flattened densely scarred endocardium. The right ventricle was slightly hypertrophied and the right ventricular cavity was encroached upon by the hypertrophied and dilated interventricular septum. The valves appeared normal.

On microscopic examination there were focal areas of lymphocytic infiltration in the myocardium, endocardial fibrosis of the left ventricle, and vacuolization of muscle fibers in the subendocardial layer of the left ventricle. Best's carmine stain revealed the vacuoles to contain glycogen.

The lungs revealed some compression atelectasis and were slightly edematous. Microscopically the lungs were the seat of minimal interstitial bronchopneumonia.

The liver weighed 350 gms. (normal 274) and appeared congested. Microscopically there was mild centrilobular atrophy and minimal fatty infiltration.

The probable cause of death was ventricular fibrillation following cardiac decompensation.

Fiedler, in 1899, described isolated myocarditis in man and since then this lesion has been recorded under a variety of names: Fiedler's myocarditis, myocarditis of unknown etiology, allergic, isolated, primary, interstitial, circumscribed, diffuse, and idiopathic myocarditis. The clinical picture is usually one of progressive myocardial failure, unassociated with the usual causes of myocardial damage. The outstanding manifestations are tachycardia out of proportion to the temperature, respiratory difficulty, cardiac enlargement and often increasing cyanosis. The electrocardiogram may reveal T wave changes. The course of the disease ordinarily is rapid and progressively downhill. Death is frequently sudden and unexpected.

The usual pathologic findings are a dilated and hypertrophied heart with associated findings of congestive failure. The myocardium usually exhibits



diffuse and nonspecific inflammatory changes. Recently some involvement of endocardium and epicardium have also been recognized. Pericardial effusion is rare. An interstitial type of pneumonitis has occasionally been described in association with this type of myocarditis and the initial manifestations of this condition are not infrequently those of an upper respiratory infection.

The etiology of this disease remains obscure. The myocarditis associated with various infectious diseases, such as diphtheria, pneumonia, rickettsial infections, typhoid, and meningococcal infections, is well known. Also, a nonspecific myocarditis has occasionally been reported in association with tonsillitis, nasopharyngitis, acute and subacute glomerulonephritis, and a multitude of other infections. Myocarditis occurs frequently in acute poliomyelitis and has been reported in other virus diseases, including epidemic encephalitis, mumps, and influenza. Occasionally infectious mononucleosis is associated with a myocarditis. Deficiencies of vitamins B and

E and of potassium have been shown experimentally to cause myocarditis.

Various other agents have been implicated in the etiology of the remaining cases of nonspecific myocarditis, usually called Fiedler's myocarditis. Some viral agent has frequently been suggested. Helwig and Schmidt\* isolated a virus from the heart of an anthropoid ape and were able to reproduce myocarditis in guinea pigs, and myocarditis and encephalitis in mice and hamsters. Hypersensitivity has also been shown experimentally to produce similar myocardial lesions and has occasionally been implicated clinically.

#### ANATOMICAL DIAGNOSIS:

Fiedler's myocarditis

Generalized venous congestion

Minimal fatty infiltration of liver

---

\*Helwig, F. C., and Schmidt, E. C. H., Jr.: A Filter Passing Agent Producing Interstitial Myocarditis in Anthropoids Apes and Small Animals. *Science* **102**: 31-33, July, 1945.

### Histamine Relieves Pain.

The body chemical that makes hay fever patients suffer can bring relief from disabling leg pains to patients with blood vessel diseases. Dr. Isidor Mufson reported in the August 28 *Journal of the American Medical Association* on infusions of histamine for patients with diseases of the peripheral blood vessels (those near the skin). The infusions helped many patients to walk again and even prevented amputation in some severe cases.

Diseases resulting in closure of the vessels, such as arteriosclerosis, have become more important as causes of death because they occur with advancing age and because our life span has been increased. Insufficient circulation in those vessels is "rarely cured by removing the cause" but frequently can be helped by expanding the nearby vessels. Histamine, acting as a dilator, also may bring about permanent structural changes which prolong the successful effect of the treatment. Histamine is a natural body product, and its unusual concentration in the blood stream is what causes the swollen nose

membranes and tearful eyes of the hay fever sufferer. It is too strong to be injected into the veins in concentrated form, but when infused, or allowed to flow by gravity into an artery, it is "safe" and "powerful."

Symptoms of peripheral blood vessel diseases include reduced tolerance to walking, and sleep-preventing pain when the patient is lying down. The pain can be relieved only by standing. Dr. Mufson said that of 150 patients with foot and leg pain, 36 per cent were able to walk up to seven blocks after treatment with histamine. Fifty-two per cent could walk from seven blocks to an unlimited distance. Of this last group, 40 per cent remained improved for as long as two to seven years after treatment. In another group of 41 patients treated and reported by other physicians, 70 per cent walked better after histamine infusions. 23 patients, so disabled that amputation was being considered, returned to normal routines. Only six severe cases required amputation. Many of this whole group had gangrene. The histamine infusions plus antibiotics helped to clear up infections among the gangrenous patients.

## MEDICO-LEGAL NOTES

### The Practitioner's Role in the Medical Examiner System\*

Seven years have passed since the adoption of the Medical Examiner System in Virginia. During those seven years our system has achieved nation-wide recognition and has been studied by many other states interested in establishing a similar system.

What measure of success the Medical Examiner System in Virginia has achieved is due primarily to the key man in the System—the local medical examiner. That concept has been the keystone of the structure and operation of the System in Virginia from its inception. No public agency established for the inquiry into certain types of death can succeed without alert, well trained local medical examiners to investigate the cases reported to them.

This fundamental concept of the Medical Examiner System can be extended one step further to include the practicing physicians in a state because a great number of the cases investigated each year are reported to the local medical examiner by physicians. Fortunately, in Virginia the Medical Examiner System has been enthusiastically received throughout the State by the medical profession and they have cooperated to the fullest in reporting cases as required by law. This recognition of reportable cases by the practicing physician is vital to the continued success of the Medical Examiner System.

There does occur, however, the occasional case in which, because of a number of reasons, a death is not properly reported and only reaches the attention of the Office of the Chief Medical Examiner when the death certificate is received by the State Bureau of Vital Statistics and that agency refers the certificate for investigation.

Since the busy practicing physician may have forgotten some of the deaths required by law to be reported it might be well at this time to review them and comment on some of the problems that arise from time to time.

Deaths which must be reported are those unattended by a physician, those occurring suddenly when in apparent health, all violent deaths, suspicious deaths, unusual deaths, deaths in prison or jail, and stillbirths attended by a mid-wife.

*Unattended natural deaths* include those without

obvious or probable cause, those unattended by a physician at any time, and those unattended by a physician during the terminal illness, especially if such illness appears unrelated to a disease previously diagnosed and treated.

*Sudden deaths* include those which are instantaneous without obvious cause, those following an unexplained syncope or coma, and those following an unexplained rapidly fatal illness.

*Suspicious deaths* are those suspected of having resulted from accident, suicide or homicide where the circumstances are not clear cut.

*Violent or unnatural deaths* are those due to accident, suicide or homicide resulting from any physical, chemical, electrical, thermal or related means.

The practicing physician is most likely to encounter deaths, classified as unattended by a physician, sudden when in apparent health and certain suspicious deaths. In the usual case where death is due to accident, suicide or homicide the case is reported to the medical examiner by the police, funeral home or others, so the physician who might have been called during the emergency generally has no occasion to notify the medical examiner. There are certain cases, however, where the practicing physician is the only one who is in a position to judge whether or not the case should be reported to the medical examiner and if he does not do so an adequate medico-legal investigation is forever after made impossible.

Probably the most common type of case in which the attending physician has forgotten to call the medical examiner is where death has occurred weeks, months or years following an accident. Where the death can reasonably be attributed to the accident, no matter how long the interval between injury and death, the case must be reported to the medical examiner for he is the only one who can issue a valid death certificate. For example, if a person received a transection of the spine with paraplegia and two years later dies of septicemia due to infected decubitus ulcers, the death must be reported to the medical examiner because the death was related to the original injury. However, should the same bedridden individual die following the typical symptoms of a cerebro-vascular accident and a history of

\*Contributed by: Harold L. Beddoe, M.D., Assistant Chief Medical Examiner, Office of the Chief Medical Examiner, Richmond, Virginia.

hypertension, the death could not reasonably be attributed to the accident and therefore would not be a case for the medical examiner.

Another common type of case is that in which the physician is treating the patient for some relatively benign condition and the patient dies in his sleep or drops dead while at work. Unless his death is related to the condition being treated by the physician the death must be reported to the local medical examiner.

The family physician is very often the first one called in cases of sudden death while in apparent health. The physician may sign the death certificate without notifying the medical examiner because he knows the family well, or he may believe that a medico-legal investigation is not required or he may be satisfied from the story provided by the family that no suspicious circumstances exist.

These cases are of public interest, however, and should be reported to the medical examiner. Not infrequently an autopsy will reveal that death in these cases was due to an unsuspected overwhelming contagious disease, or some industrial public health hazard may be discovered. It is of vital interest in such cases to know the cause of death because the health of others may be endangered. Once the etiology is discovered the proper safeguards may be undertaken.

The physician should never hesitate to notify the

local medical examiner in any case where there is some doubt as to the nature of the death. He will thereby avoid any future possibility of a claim that he failed to notify the proper authorities and he places the responsibility for the decision upon the medical examiner whose duty it is to investigate such cases. The medical examiner is limited in his authority to those cases described above and, if his decision seems arbitrary in a given case, this must be borne in mind by the reporting physician since the protective cloak of the law covers the medical examiner only so long as he does not exceed his authority.

The medical examiner can only order autopsies in those cases legally within his jurisdiction and if the *public interest* would be served by such autopsy. An autopsy will not be authorized simply to settle some academic medical question, i.e., in a hypertensive individual whether death was due to a cerebro-vascular accident or acute coronary occlusion.

With all of the practicing physicians throughout the State on the alert to carefully weigh the circumstances of each death encountered there will result a greater protection of the public health, more accurate reporting of vital statistics, the equitable settlement of estates, insurance policies and Workmen's Compensation claims and a minimum number of otherwise unsuspected deaths of a violent or unusual nature.

---

### New Books.

The following are some of the new books recently received in the Tompkins-McCaw Library of the Medical College of Virginia. They are available to our readers under usual library rules.

Advances in genetics. Vol. 6, 1954.

American Medical Association—Fundamentals of anesthesia. 1954.

Army Medical Service Graduate School—Medical basic science notes. Vol. I, II, and III, 1950-53.

Bower and Pilant—Communicable diseases. 7th edition, 1953.

Burch—A primer of congestive heart failure. 1954.

Ciba Foundation—The chemical structure of proteins. 1954.

Collected papers of the Mayo Clinic and Mayo Foundation. 1954.

Craig, editor—Hormones in health and disease. 1954.

Critchley—The parietal lobes. 1953.

Dubuisson—Muscular contraction. 1954.

Fishbein, editor—Children for the childless. 1954.

Hosler—A manual on cardiac resuscitation. 1954.

Irons—The story of Rush Medical College. 1953.

Joseph and Zern—The emotional problems of children. 1954.

King—Psychomotor aspects of mental disease. 1954.

Michal-Smith, editor—Pediatric problems in clinical practice, 1954.

Oak Ridge National Laboratory—Physiological effects of radiation at the cellular level, 1952.

Ormsby and Montgomery—Diseases of the skin. 8th edition, 1954.

Progress in neurology and psychiatry. 1954.

Rietz and Pollard—Problems in organic chemistry. 1953.

World Health Organization and United Nations Educational, Scientific and Cultural Organization—World Medical periodicals, 1953.



## MENTAL HEALTH

---

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

---

### Research in Mongolism\*

Last December 1, 1953 the medical staff at this Hospital began a research project in an endeavor to secure some information as to the relationship of thyroid extract and also pituitary extract to mongolism. This study was initiated after a visit here by Dr. C. E. Benda, Director of Research at The Walter E. Fernald School, Waverly, Massachusetts. Through the generosity of a local family we secured Dr. Benda for a lecture clinic on October 19, 1953. Beside our local staff and affiliated departments, there were present members of the medical profession from the Lynchburg, Charlottesville and Danville areas.

Dr. Benda expressed a conviction that a number of mongoloids had shown improvement when given thyroid extract together with whole pituitary gland extract from growing animals. He indicated that the administration required a period of several years.

Our medical staff with the collaboration of Dr. Benda, set up the following project here: On December 1, 1953, sixteen mongoloids, most of whom were under three years of age, were started on the program on a research basis. X-rays of the bones, of the forearm, and of the AP and Lateral Skull were recorded. Psychological evaluations of each child were made.

Four were put on 1/4 grain thyroid extract alone, four on 1 grain of whole pituitary extract from calves alone, four on 1/4 grain thyroid extract together with 1 grain of whole pituitary extract from calves, and four as controls were put on no treatment. It is proposed to continue this regime for a long time with six months X-ray and psychological re-evaluations. A Pediatrician has been checking these children at monthly intervals.

The plan is to start other mongoloids on the pituitary and thyroid therapy a little later—probably at the end of the first six months research project with the first sixteen patients.

Mongolism, or mongoloid idiocy, is a common type of mental deficiency making up from 5 to 10 percent

of all defectives. It may be classified in the group of toxic mental defect although little, if any, evidence exists about the nature of the toxic agents responsible for the disease. Mongolism is distinguished by a peculiar conglomeration of physical traits. The stature is stunted; the head is small with a flat occiput, the hair course and scanty. The facial traits resemble somewhat those of individuals of the mongol race. The palpebral fissures are small, almond-shaped and slanting; epicanthic folds are present; the face is flat; the nose is short with a depressed bridge; ears are small, rounded and show a simple pattern; the tongue is large and fissured, the lower jaw rounded. Limbs are short, hands and feet small, short and flabby. Across the palm of the hand there is a transverse straight line, and on the sole another straight line from the heel to the first interdigital space. The little finger of the hand is curved medially and one transverse crease is missing. A large cleft is seen between the big and the second toes. There is a generalized laxity of the ligaments allowing an abnormal hypermobility of the joints. Congenital anomalies of the heart are not uncommon. Sexual development is incomplete and, with extremely rare exceptions, mongols are sterile.

Many variations in the number and degree of these physical abnormalities can be observed from case to case, but usually, there are enough traits present in the individual case to make the diagnosis a matter of superficial inspection.

The disease can be recognized at birth. The physical symptoms are not progressive and usually there is no mental deterioration. The majority of patients have an I.Q. between 15 and 40 with the upper limit in the 50's. Mortality in young age from intercurrent infection is high.

The pathological lesions are scanty and of doubtful significance. The brain is smaller and the convolutional patterns are simpler than normal. Loss of nerve cells and scattered areas of destruction of nerve coverings (demyelination) and scar tissue (gliosis) are often found but whether these features are the expression of an essential pathological proc-

---

\*Article prepared by Dr. W. I. Prichard, Superintendent, Lynchburg Training School and Hospital, Colony, Virginia.

ess or the consequence of intercurrent infections to which mongols are particularly prone, is not clear.

The etiological factors responsible for the disease are little understood. It is maintained that the condition appears in the fetus before the third month of pregnancy as a consequence of a variety of toxic

conditions inherent to the mother and associated with advanced age, or endocrine disorders or pathological lesions of the uterus, but no conclusive evidence has ever been offered in favor of any of these factors.

There is no specific treatment for the condition.

---

### Excessive Oxygen Related to Eye Disease.

Excessive administration of oxygen to premature infants is believed directly related to the development of a serious eye disease which may result in blindness, it was reported in a recent Journal of the American Medical Association. The disease, called retrolental fibroplasia, may be controlled by severely limiting the concentration of oxygen given to premature infants, a restriction which does not appear harmful, in the opinion of Drs. Jonathan T. Lanman, Loren P. Guy, and Joseph Dancis, New York. "Retrolental fibroplasia was first recognized as a disease of premature infants in 1942; it is now first among the causes of blindness in children in the United States, and is the foremost problem other than death itself in the care of premature infants."

The doctors based their conclusions on a year-long study of 64 premature infants admitted to the Bellevue Hospital Premature Nursery. The babies weighed between two and four pounds at birth. Thirty-six of the infants were given a high concentration of oxygen in their incubators and 28 received a low concentration. In the groups receiving a high oxygen concentration there were eight cases of irreversible retrolental fibroplasia. Six of these infants are believed to have no useful vision, while two may have useful vision in one eye. In the groups of infants receiving a low oxygen concentration, oxygen was administered only when breathing difficulty occurred. Early reversible stages of the condition developed in 22 (61 per cent) of the infants receiv-

ing a high concentration of oxygen. Only two babies in the groups receiving a low concentration of oxygen showed early stages of the disease.

All groups of patients received identical incubator care, formulas and vitamin therapy. Twenty per cent of the groups receiving a high oxygen concentration died, compared with 30 per cent in the groups receiving low oxygen. However, five of the infants in the groups getting a low oxygen concentration died of causes not connected with oxygen therapy, thereby reducing the death rate to 20 per cent, also. The correlation between oxygen therapy and the development of the disease is uncertain. The condition may be caused by excessive oxygen damaging the developing retinal blood vessels and the nerve cells of the retina.

"In a comparison of liberal and restricted oxygen therapy in premature infants, irreversible retrolental fibroplasia appeared in infants in the group with high oxygen but not in the group with low oxygen. Reversible, vascular stage lesions occurred in both groups, but with nine times the frequency in the group with high oxygen concentrations. Excluding infants dying of recognized causes with no known relationship to oxygen therapy, the mortality rates in the groups with both high and low oxygen concentrations were the same.

"We believe that retrolental fibroplasia is directly related to the excessive administration of oxygen and can be controlled by severely limiting oxygen therapy to premature infants. Such restriction does not appear harmful."

NOTES  
ON  
PULMONARY TUBERCULOSIS\*

Modern Therapy (III)  
Indications (B)

The Virginia State Health Department has requested that *all* cases of tuberculosis be reported, whether or not they are regarded as active. (See "What Is a Reportable Case", August Issue, Virginia Medical Monthly).

As previously described (see September Issue, Virginia Medical Monthly) *all* newly reported cases for whom formal treatment (systemic rest, drugs, etc.) is prescribed, are classified as *active*, by local health departments affiliated with the Virginia State Health Department. This is done on the seemingly well founded assumption that there would be no point in deliberately modifying the normal life pattern of a patient, or in subjecting him to drug therapy, except to combat a hazard to his life or health which is considered to exist because of the presence of tuberculosis.

On the other hand *all* newly reported cases, for whom treatment is *not* prescribed, with extremely rare exceptions, are categorically classified in Health Department Registers, as "apparently inactive", as are those who were originally classified as "active" but who achieve a status of "apparently inactive" by virtue of retrogression of their disease to a point where treatment is no longer prescribed.

The reason *newly* diagnosed cases are not classified in Health Department Registers as "inactive", even when no treatment is immediately indicated or prescribed, is because of the current diversity of standards employed, to say nothing of the actual absence of really dependable criteria, to determine eligibility for this classification, *definitely, at time of diagnosis* (there being invariably a *retroactive* time element involved).

Accordingly it would seem to be *far safer* and probably more sound, from a public health point of view, to consider these cases "inactive" only after they have been observed and periodically examined for a specified period following diagnosis. During this "probation period" the potentially "inactive" patient is classified as "apparently inactive". Upon

completion of the probationary period, during which the patient has taken no formal treatment, and has shown no tangible evidence of reactivation, the case is certified and accordingly re-classified as "inactive"; his record is closed, i.e., the patient is removed from supervision of any kind by the health department.

The reason the previously "active" case, when no longer in need of treatment, is reclassified as "apparently inactive" instead of "inactive", is because during the terminal phase of treatment no one can be sure as to whether his apparent good health during that phase was due *in part* to treatment still being received, or whether it really was due *wholly* to his disease having become truly "inactive". It is felt, therefore, that this patient, also, should be observed and examined periodically, i.e., "tested under fire", *after* he has ceased to take formal treatment (after he has begun to lead a normal life), before being certified for closure as "inactive".

*What specific bearing does "exercise" have on this classification?*

Eventually, it is hoped, local health department registries will contain no "inactive" cases which have not, over a period of *at least* two years, met at least minimum stipulations for closure, during which the patient's exercise has been unrestricted, and he has suffered no clinical reactivation. During this period he is classified as "apparently inactive". Thus it will be seen that exercise is unrestricted (no formal rest is prescribed) in both the "apparently inactive" and the "inactive" classifications. Patients are regarded as "presumably non-communicable" and "non-communicable" respectively in these categories.

The active case on the other hand may require, in terms of systemic rest, anywhere from 24 hours a day flat in bed to 15 minutes on a couch after lunch each day. "Exercise" may consist of practically none, to working 8 hours a day in addition to leading a perfectly normal life in other respects, except for the fifteen minutes per day which the patient's

\*Prepared by the Virginia State Health Department.



physician may still consider necessary to combat an existing hazard to the patient's health or life by virtue of his tuberculosis.

*What about drugs?* Obviously if the patient is on specific antituberculosis drug therapy, he is classified as "active" whether *or not* his exercise status is simultaneously restricted; he is taking specific or formal treatment for tuberculosis which *categorically* would make his case "active". Why would anybody take drugs for any disease except to combat an existing hazard to health or life sufficient to indicate need for their administration?

*What about collapse therapy?* Where the collapse measure is reversible, the patient again must be considered to have "active" tuberculosis by virtue of this fact alone, otherwise the collapse procedure would have been discontinued.

The key word throughout is *hazard*; when no hazard remains sufficient to justify a formally restricted exercise status, the prescription of drugs, or the continuation of a reversible collapse procedure, the patient is eligible for reclassification as "apparently inactive".

*What about patients whose original (pre-illness) pattern of life has been permanently altered, deliberately, by virtue of their "having had" pulmonary tuberculosis?* Some patients are advised by their physicians to acquire a new, physically (or otherwise) less exacting skill or occupation by which they may earn a living *following* their "recovery" from tuberculosis, with the thought in mind that this will reduce to a minimum any residual tendency the disease might have to reactivate or "relapse". When undertaken with this express purpose in mind, the differential in systemic rest obtained in the new job as compared with the old, might, *by stretching a point*, be considered as "treatment" prescribed to combat a residual hazard to health or life, caused by tuberculosis, i.e., treatment for subclinically active disease. This would of course go on *indefinitely* and the patient could *never* hope to become eligible for reclassification as "apparently inactive" as this

term and concept have been described.

From a *practical* standpoint, however, this extreme, overly extended, "strained" application of the term "subclinical activity" clearly serves no useful purpose whatever in any phase of tuberculosis control, including patient management. Its employment in this sense can easily be deleted without detracting in the least from the extremely important role both the term and the concept can and should play, when employed as suggested.

Furthermore, it would actually be much more realistic to look upon any newly acquired less exacting occupation as being prescribed to compensate for an anticipated partial permanent disability *resulting from* tuberculosis (*following* recovery from both clinical and subclinical disease). It would then be this *partial permanent disability* which makes impossible safe return to former employment, just as with the loss of a leg. The same can be said for many other types of alterations of ex-tuberculous patients' previously conceived ideas of a normal life pattern *for them*, unrelated to occupation, when *prescribed on a permanent basis*.

This is not to be confused with systemic rest obtained through change in occupation prescribed or taken as a part of total systemic rest, or in lieu of other forms of systemic rest, for treatment of clinically or subclinically active tuberculosis; this latter treatment *also* may be prescribed upon a perennial basis, where the real objective, consciously or subconsciously, is "control" rather than "clinical cure".

Specific anti-tuberculosis drugs and modern surgery now available to supplement basic systemic rest, applied to new cases diagnosed earlier and earlier, should, of course, reduce tremendously, and before long virtually eliminate from the tuberculosis scene, the notoriously large group of unfortunate individuals who in the past (and at present) have had to take treatment of varying degree for *active* tuberculosis the balance of their lives, *or*, who were obliged to compensate in one way or another for a partial permanent disability resulting therefrom.

## PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.

*State Health Commissioner of Virginia*

### Veterinary Public Health

Throughout history man and animals have lived in close association. Man has derived food, clothing, transportation and companionship from his animal friends for many thousands of years. Today, the same story holds true and, in addition, we are supplied with medicines, serums and vaccines of animal derivation.

Although the animal has contributed significantly to medical research and the conquest of human disease, certain disadvantages are latent in this biological corporation. There are some 80 infectious diseases transmissible from animals to man. Placing animals in an unnatural and crowded environment, man has facilitated the concentration of disease producing organisms. Distance, as a factor in isolating susceptible hosts, has rapidly become ineffectual with modern modes of transportation. The exotic disease of yesterday may become all too familiar tomorrow. Because of all these factors, the (Public Health) Veterinarian has become a part of the public health organization.

The World Health Organization describes veterinary public health as "all the community efforts influencing and influenced by the veterinary medical arts and sciences applied to the prevention of disease, protection of life and promotion of the well-being and efficiency of man." While the practice of veterinary medicine has always contributed significantly to the control of many of man's infectious diseases, health departments have only recently incorporated broad veterinary public health programs into their organizations. Virginia is one of 22 states with a full time public health veterinarian in the State Health Department. His place and duties may be broken down into the following broad categories:

1. Development of programs to control and eradicate animal diseases transmissible to man.
2. Liaison with other departments of state government such as Agricultural and Wildlife regarding veterinary public health problems.
3. Consultation with other operational units in the health department, local governing bodies, voluntary agencies and the veterinary profes-

sion concerning veterinary public health problems.

4. Development of field and laboratory investigational projects of special animal disease problems.
5. Assistance in developing programs for inspecting foods of animal origin.

When we understand that animal members of our environment may actually contribute to the disease picture in the human family, we can proceed to methods and means for the control of specific conditions arising from animal sources. It is axiomatic that many of these diseases could be eliminated as a human health hazard if they could be stamped out in the animal population. As examples of such diseases we could list rabies, brucellosis, erysipeloid, trichinosis and psittacosis.

Rabies, in particular, lends itself well to public health control measures. We have now the tools at hand with which to stamp out this infection. A new live modified virus vaccine for dogs has been evolved by culturing a modified strain of the organism in chick embryo (Fleury strain). It has been shown to be safe, when properly used, and to impart immunity, in dogs, lasting up to 39 months. More than two and one-half million doses have been administered with no serious reactions except in one puppy and one cat. The puppy and cat developed what was termed "neurological disease," and died. These two isolated occurrences pale in significance when we think of the relatively large number of anaphylactic reactions occurring with the Semple vaccine. Coupling mass immunization of dogs, elimination of strays and the reduction of wildlife vectors with public education about this disease would eventually eliminate rabies as a serious problem in this state. For every rabid dog in a community, it has been estimated that 20 persons undergo the Pasteur treatment.

Psittacosis is becoming more and more of a problem. With the discovery of the disease in native birds (ornithosis), quarantine regulations on the psittacine family were relaxed. Although psittacine birds are most often involved where human infections are present, turkeys, chickens and pigeons have been incriminated. Atypical cases of pneumonia,

upon serological diagnosis, have often proved to be psittacosis. A careful case history will often point to avian vectors. Young birds with psittacosis most commonly die but older birds which have survived an attack become carriers and periodically discharge the organism during relapses. Buying birds from a reputable dealer is the best protection and guarantee that the bird is healthy.

Brucellosis is the greatest of our problems both in numbers infected each year and in control methods. It has been estimated that 10,000 human cases occur annually in the United States although fewer are reported. Through the 15th of August, 1954, Virginia has had 27 cases of undulant fever reported. Most of these cases are among people who work with animals (farmers, meat packers, veterinarians). Tests run in various packing plants over the nation would indicate one third of the packing house workers have significant brucellosis blood titres. The most common strain of the organism found in man is *B. suis*. Perhaps one of the inconsistencies of control programs lies in the elaborate test programs run on cattle while swine are so often ignored. Of course, any of the three brucella strains may be present in a susceptible host without regard to species. The disease is rural and it is definitely an occupational hazard with certain groups. It often masquerades as other conditions. Control lies in eliminating the disease in livestock by testing, vaccinating

and slaughtering of young animals. Carrying out of good milk sanitation ordinances prevents the extensive spread of Bang's disease.

There are many other diseases in Virginia's livestock of public health significance. Weils disease is more prevalent than before, mycotic skin conditions of the family cat may appear on the children; salmonellosis and *Taenia saginata* appear in the food; 20% of Americans have *Trichinella* larva in their muscles. The new and unusual "cat scratch fever" is not to be disregarded. All of these, and more, are problems for the veterinary public health program planner.

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	Aug. 1954	Aug. 1953	Jan.- Aug. 1954	Jan.- Aug. 1953
Brucellosis -----	9	10	30	38
Diphtheria -----	0	3	26	56
Hepatitis -----	161	202	2946	1649
Measles -----	209	145	23378	4627
Meningococcal Infections -----	4	7	77	145
Poliomyelitis -----	148	262	253	455
Rocky Mt. Spotted Fever -----	6	11	28	50
Streptococcal Infections -----	301	378	3564	4175
(Incl. Scarlet Fever)				
Tularemia -----	1	4	25	22
Typhoid Fever -----	5	6	35	34
Rabies in Animals -----	18	30	272	329

### Nervous Stress.

That familiar urge to "get away from it all" should be succumbed to when it is a sign of stress according to an editorial in the July 10th Journal of the American Medical Association.

The editorial said stress implies "an inner conflict or a conflict against circumstances for which no immediate action is appropriate."

"As with other conditions, prevention, when possible, is better than cure. Removal of the cause is still the best treatment. After that, rest, a change of scene, and a change of interest are the most effective therapeutic measures." Continued stress may result in such diseases as duodenal ulcer, malignant hypertension and rheumatoid arthritis. It may play

an important role in nervous fatigue, infection and intoxication.

The editorial reported on a study of combat stress during World War II and the Korean conflict. It showed that men who had been under almost constant artillery bombardment for five days with only 7 per cent casualties were far worse off than those who had withstood 18 hours of intense fighting in which the unit suffered 70 per cent casualties.

The study also showed an enormous difference in individual reaction to stress. It appears that some persons have the ability to withstand much more stress without breaking down.

But the editorial warned that "no one is immune from breakdown if the stress is severe enough and sufficiently prolonged."



# First Interstate Scientific Assembly



## To the Members of The Medical Society of Virginia

Plans are nearly completed for the First Interstate Scientific Assembly being held at the Shoreham Hotel and the Sheraton-Park Hotel, Washington, D. C., October 31 through November 3, 1954. This Annual Meeting of The Medical Society of Virginia which is being held for the first time with the Medical Society of the District of Columbia has every indication of being the most outstanding ever held by either society.

We trust that by now you have made yourself familiar with the program and hope you have found it to your liking. Many well-known guest speakers, several of our distinguished colleagues from the District of Columbia and of course, as customary, many of our own members will appear on the Scientific Program. The Scientific Exhibit was carefully selected, as were the Medical Motion Pictures. We believe you will find everything to be diversified and constructive.

The many social events were planned with only your pleasure in mind. And we wish to remind you that this year there will be no speakers at the Annual Dinner. "Skitsophrensia"—A Medical Mèlange—will be presented following the dinner.

With Dr. Archer, who will always be remembered as one of our most distinguished Presidents, as a leader of the Assembly, every effort has been made to make this meeting a memorable one.

However, only your attendance can make it a success.

Cordially yours,

A handwritten signature in cursive script, reading "James W. Lora".

Co-Chairman, Committee on Arrangements,  
First Interstate Scientific Assembly

## THE MEDICAL SOCIETY OF VIRGINIA REPORTS FOR THE 1954 ANNUAL MEETING

### Executive Secretary-Treasurer

As fiscal year 1953-54 draws to a close, the administrative staff of The Medical Society of Virginia takes pride in reporting to the membership that the Society has never been on sounder ground financially, its membership has never been greater, and its activities have never been more varied and pronounced. Credit must go to an enterprising President and Council, and to the various committees, whose activities reflected an interest and sincerity of purpose which could result only in progressive accomplishment.

The mid-winter meeting of Council was held February 25, and complete minutes can be found in the April 1954 issue of the Virginia Medical Monthly.

*Committees:* Thirty-four committees (12 standing and 22 special committees) have done a very fine job in fulfilling their responsibilities, and the membership is urged to read carefully the committee reports found on the following pages. It is an absolute fact that a medical society is only as progressive as its committees, and the accomplishments of the past year are a direct result of committee effort. Fourteen committees utilized Society headquarters for meetings, and eighteen made use of other available services. Although this remains a disappointing number, some encouragement can be found in that it represents a slight increase over last year.

*Component Societies:* There remain 46 component societies to The Medical Society of Virginia. Two of these societies are comparatively inactive and a positive effort will be made during the coming year to assist them back to their former status.

Visits were made to seventeen meetings of component societies which is a gain over previous years. Only by this personal contact is it possible for the State Office to establish and maintain that close relationship with its members which is so necessary in any progressive organization.

*Membership:* The continuing drive to bring all eligible physicians into The Medical Society of Virginia is meeting with amazing and unexpected success. The magic figure of 2400 has been passed and the following statement tells the story in detail:

Members reported July 31, 1953	2,368
New Members	182
Reinstated	6
	<hr/>
	188
Deaths	57
Resignations	25
Dropped	23
	<hr/>
	105
Increase	83
	<hr/>
Total Membership as of August 31, 1954	2,451

*American Medical Association Membership:* During the first half of the year, a campaign was waged to bring about the reinstatement of many Society members who had been dropped from the A.M.A. as a result of the confusion surrounding 1950 A.M.A. membership dues. A ruling of the A.M.A. made it possible for those physicians to be reinstated if their 1954 dues were paid by July 1, and a goodly number took advantage of the offer.

A late check of the records reveals that 1918 members of The Medical Society of Virginia are members of the American Medical Association. This means, of course, that the Society is still authorized two delegates to the A.M.A.

*Annual Meeting:* The 1954 Annual Meeting, known as the First Interstate Scientific Assembly, is a joint affair with the Medical Society of the District of Columbia, and has posed a number of problems never before encountered by the staff. This historical event promises to be one of the finest meetings ever held in the East, and all credit must go to the joint committees on arrangement. These committees have worked untiringly to make the Assembly an outstanding success, and their work certainly deserves the plaudits of the membership.

The staff has worked with the Executive Committee of Council in making initial plans for the 1955 Annual Meeting, which will return to Richmond. Dates agreed upon are October 16-19, 1955.

*Meetings and Conventions:* The state office was represented at both sessions of the American Medical Association, two other national conferences, two meetings of state associations, and eleven special meetings of civic groups, etc.

*Special Events:* Two events of particular significance took place during the year, and the state office staff is indeed pleased to have been associated with both. A reception, given by the Society in honor of Dr. Walter B. Martin, was held in St. Louis during the Int rim Session of the A.M.A. and was attended by approximately 350 officers of the A.M.A. and their guests.

A statewide conference on the problems of the medically indigent was presented in cooperation with the Virginia Council on Health and Medical Care and attracted national attention. The conference, first of its kind anywhere, was attended by over 300 representatives of medical and civic groups. A report of the conference can be found in the February issue of the Virginia Medical Monthly.

*Selective Service:* There was a noticeable increase in the work required for the State Voluntary Committee to Selective Service. After a brief respite occasioned by the end of hostilities in Korea, etc., the Armed Forces have again issued calls to replace a large number of physicians and dentists soon to be separated from service.

The work continues to require approximately 35-40 man hours per month.

*Woman's Auxiliary:* Once again the Auxiliary made important contributions to Society progress. The program of the Annual Public Relations Conference was highlighted by an Auxiliary presentation on the importance of auxiliaries to component societies. This undoubtedly had much to do with the fact that two new component auxiliaries were organized during the year.

The Auxiliary also, for the second straight year, made it possible for an exhibit to be sponsored at the Atlantic Rural Exposition. Without Auxiliary assistance in supervising the exhibit, such an undertaking would not have been possible.

The state office saw continued evidence of the growing interest in Auxiliary affairs, and wishes to express appreciation of Auxiliary efforts in helping prepare for the First Interstate Scientific Assembly.

*Virginia Council on Health and Medical Care:* This organization has turned in another excellent performance, especially in the field of physician placement. In this connection, the state office has referred to the Virginia Council 61 inquiries from physicians interested in practicing in Virginia. A Council report reveals that 29 placements have been effected during the year.

*Personnel:* A severe blow was suffered by the Society with the loss of Miss Agnes V. Edwards, whose death occurred on May 22.

Mr. Edwin F. Smith, Jr. came with the Society on January 1 and has assumed the duties previously handled by Mr. Nash. The addition of Mr. Smith keeps the number of state office personnel at five, the same as reported last year. No additions are contemplated.

The staff wishes again to extend to the membership a most cordial invitation to visit the Society Headquarters at 1105 West Franklin Street, Richmond.

ROBERT I. HOWARD

### Woman's Auxiliary

The Woman's Auxiliary to the Medical Society submits the following report:

Virginia reports 877 members for the year, an increase of 116 over last year. We have organized a new auxiliary in Wise County and will meet with the Tri-County Medical Society in Suffolk on September 28th with the hope of organizing another one.

Our program for the year has followed the National program, with special attention being given to Health Education in the County Auxiliary meetings.

Our most outstanding work in Public Relations was the presentation of a program showing the kind of work done by our organization and why it is good Public Relations. This was presented before The Medical Society of Virginia's annual state-wide Public Relations Meeting. The program was prepared by Mrs. Richard M. Reynolds, who is now the National Public Relations Chairman, participated in by six auxiliaries, and moderated by Mrs. Leo J. Schaeffer, our National President.

Our Auxiliaries have cooperated with schools and Parents and Teachers Associations, and with all health

and welfare organizations, have supplied speakers where they were desired, have done much community service, and have entertained representatives of other organizations at Public Relations Meetings. We have maintained state and local memberships in the Virginia Council on Health and Medical Care, and have tried to further its program.

We have stressed Nurse Recruitment this year as a main objective. Eight scholarships are being given by County Auxiliaries, six of which are three year scholarships. We have worked especially on Future Nurses' Clubs, and now have seven, five of which were organized this year. Where it has not been possible to do other Nurse Recruitment, talks have been made to High School girls, particularly seniors, in at least twenty schools. Conducted tours of hospitals have been given. Parties and dances for student nurses have been held, and contributions toward the maintenance of nursing schools have been made.

As a member of the "Virginia Council of Legislative Chairmen of State Organizations" our Legislative Chairman attended the State Legislature regularly, kept careful watch over bills which concerned the medical group, and reported back to the counties. She reported, also, on National legislation.

Virginia maintains the Leigh-Hodges-Wright Memorial Fund, to which our Auxiliaries make contributions every year. This fund is for the use of any physician or his family who is in need of assistance for the treatment of tuberculosis. It has not been needed this year, and is being built up for the time when it may be needed. The Norfolk County Auxiliary also has a "Benevolent Fund" to be used for a physician or his family who may be in need of it. We also contribute to the "Jane Todd Crawford Memorial Fund" of the Auxiliary to the Southern Medical Association.

Our subscriptions to "Today's Health" have been increased this year to 220 4/12 credits for the year.

We have received excellent publicity throughout the state through the press, radio and television. Our page in the Virginia Medical Monthly has carried good accounts of our meetings throughout the state each month, and is being widely read by our members.

We have stressed the American Medical Education Foundation work. The State Auxiliary has contributed fifty dollars to this, and eight of our County Auxiliaries have contributed two hundred and forty dollars, a total for this year of two hundred and ninety dollars.

The County Auxiliaries have purchased two doctors' call boards for hospitals, given 150 Christmas presents to children's Community Clinic party, have collected, repaired and fitted shoes for needy children, in cooperation with city welfare workers, have maintained a Memorial Room in a hospital, this year reflooring, redecorating and refurnishing it. "Doctor's Day" has been observed with dinners for the doctors, dances, picnics, the presentation of flowers, and with services to the communities in honor of our doctors. The most outstanding of those was in



Richmond, where sample drugs were collected from the doctors' offices, sorted out by druggists, and presented to charity hospitals. Last year the collection of drugs was estimated to be valued at \$8000.00, and they were given to Sheltering Arms Hospital. For this the Richmond Auxiliary received the first award for the best and most original observance of Doctor's Day from the Woman's Auxiliary to Southern Medical Association at the convention in Atlanta last November. This year the drugs collected were valued at \$13,300, and were divided between six charity hospitals.

The Virginia Auxiliary deeply appreciates the cooperation received from Dr. Vincent Archer, Mr. Robert I. Howard and his Staff, and from The Medical Society of Virginia for their assistance throughout the year, and wishes to take this opportunity to express sincerest thanks.

MARGARET P. HOWARD

(Mrs. Kalford W. Howard), *President*

### Publication

During the past year the staff of the Virginia Medical Monthly suffered the loss of its editor, Dr. Marvin Pierce Rucker, who died on October 23, 1953. Even during his prolonged terminal illness Dr. Rucker continued actively as editor, in which capacity he had served so effectively since 1942.

Miss Agnes V. Edwards, managing editor of the Virginia Medical Monthly since 1919, died on May 22, 1954. Miss Edwards, the daughter of Dr. Landon B. Edwards, who started the Monthly as a private enterprise in 1874, had devoted her entire energies to the welfare of the Virginia Medical Monthly for many years. Her place has been taken by Miss Spencer Watkins, who had served as her assistant since 1929.

At the beginning of this year, following the death of Dr. Rucker, an editorial board was appointed by the President to assist the Publication Committee and newly appointed editor with the editorial duties and responsibilities.

The content of the Virginia Medical Monthly has remained essentially unchanged during the past year. Two additional monthly feature columns of considerable interest have been added. The column "Medicolegal Notes" has been prepared jointly by the Medical Examiner's office and Dr. Charles W. Whitmore of the University of Virginia. The column on "Pulmonary Tuberculosis" prepared monthly by the Virginia State Health Department aims at presenting the practical diagnostic and therapeutic features of pulmonary tuberculosis.

The circulation of the Virginia Medical Monthly at this time is 2843.

LEWIS H. BOSHER, JR., M.D., *Chairman*

WYNDHAM B. BLANTON, M.D.

LLOYD B. BURK, JR., M.D.

### Scientific Exhibits

There have been two meetings of the Joint Committees for the Scientific meeting. The first meeting was held in February and the general policy of the Joint Committee was adopted.

The second meeting was held in May for the purpose of discussing various applications and deciding their acceptability. The meetings were well attended by both the Virginia and District of Columbia members. The Virginia members are indebted to the Washington members for their hospitality and friendliness which they have enjoyed. Both meetings were held at the Medical Society of the District of Columbia.

HUNTER B. FRISCHKORN, M.D., *Chairman*

### Program

Inasmuch as the Annual Meeting is this year a joint affair with the Medical Society of the District of Columbia, your Committee has worked closely with a similar committee of the District Society in preparing the program.

The complete program was published in the September issue of the Virginia Medical Monthly.

BENJAMIN W. RAWLES, JR., M.D., *Chairman*

IRA L. HANCOCK, JR., M.D.

A. A. CREECY, M.D.

### Post-Graduate Medical Education

The Committee on Post-Graduate Medical Education has had no meetings during the year. However, the work of the committee proceeded as in previous years, and was supervised by Dr. Kinloch Nelson.

A joint meeting for the Mid-Tidewater and Northern Neck Medical Societies was held in Tappahannock on April 14, 1954, and featured five speakers. Expenses were \$250.00, of which the local societies contributed \$37.50, leaving an expense to the committee of \$212.50.

The committee stands ready to sponsor such scientific meetings whenever local physicians wish to avail themselves of this service.

Although the committee operated well within its budget of \$1000.00, it recommends that the same appropriation be authorized for the coming year.

JAMES L. HAMNER, M.D., *Chairman*

JOHN T. T. HUNDLEY, M.D.

MACK I. SHANHOLTZ, M.D.

KINLOCH NELSON, M.D.

WILLIAM PARSON, M.D.

C. V. CIMMINO, M.D.

### Ethics

There have been no matters referred to this committee which necessitated a meeting of the committee or any formal report.

M. H. HARRIS, M.D., *Chairman*

H. H. HURT, M.D.

H. S. DANIELS, M.D.

### Grievance

During the past year, the Grievance Committee was requested to consider three cases that had been appealed from the component society.

Upon investigation, it was found that in one of the cases, the physician concerned was not a member of the State Society and this case was referred back to the com-

ponent society. The other two cases were carefully considered by a majority of the committee.

In each of these cases a unanimous decision was reached and the component society and the physician were advised of the committee's action.

From the small number of cases referred to the State Society, it would appear that the local committees are doing a splendid job at the local level.

W. C. CAUDILL, M.D., *Chairman*

### Judicial Committee

#### AMENDMENTS TO THE CONSTITUTION

The following amendments to the Constitution of the Society have been proposed and are now published in the official publication as required by Article XIII thereof:

##### ARTICLE IV—COMPOSITION OF THE SOCIETY

Delete the word "White" in the first line so that the first sentence shall read: "Physicians in Virginia, not practicing sectarian medicine, members of a component society, shall be eligible for active membership."

The purpose of this amendment is to authorize physicians other than those of the white race to become members of the Society.

##### ARTICLE VI—COUNCIL

Change the last sentence in the article to read as follows: "The Editor, the Speaker of the House of Delegates, and the State Health Commissioner, shall be ex-officio members of the Council."

##### ARTICLE VII—HOUSE OF DELEGATES

At the end of the present article add the following new sentence: "The Speaker of the House of Delegates shall be an ex-officio member and the presiding officer of the House of Delegates, but shall vote only in the case of a tie. He shall appoint all special committees whose duties are concerned primarily with the operation and functioning of the House of Delegates."

The purpose of these two amendments is to prescribe certain duties of a Speaker of the House of Delegates.

#### AMENDMENTS TO BY-LAWS

The following amendments to the By-Laws of the Society have been proposed in writing and will be presented to the House of Delegates for adoption or rejection at the next annual meeting.

##### ARTICLE V

Section 4. Strike out the word "President" in the first sentence and insert in lieu thereof "Speaker of the House of Delegates".

Section 5. Strike out the word "President" in the first sentence and insert in lieu thereof "Speaker".

##### ARTICLE VI

Section 1. (a) At the end of the first sentence strike out the word "President" and insert in lieu thereof "Speaker".

(b) Strike out the word "president" in the last sentence and insert in lieu thereof "Speaker".

Section 4. At the end of the section add the follow-

ing: "The House of Delegates shall elect a speaker of the House of Delegates to take office at the next annual meeting and to serve for a term of two years. At each second annual meeting thereafter a Speaker of the House of Delegates shall be elected for a two year term. In the event of a vacancy occurring in the office of Speaker the President shall appoint a Speaker to serve through the next annual meeting, at which meeting the House of Delegates shall elect a Speaker for the unexpired term or for a new term as the case may be."

##### ARTICLE VII

Section 2. (a) In the first sentence after the word "Society", strike out the word "President" and insert in lieu thereof "a member".

(b) Change the second sentence to read as follows: "The President shall vote in meetings of the House of Delegates, but shall vote in the general meetings and in the Council only in the case of a tie."

(c) In the last sentence strike out the words "the House of Delegates".

##### ARTICLE VIII

Section 1. In the fourth sentence after the word "Editor" insert ", the Speaker of the House of Delegates".

The purpose of the several amendments to the By-Laws is to provide for the election by the House of Delegates of a Speaker of the House of Delegates, and to prescribe his duties. Certain duties heretofore performed by the President will be transferred to the Speaker.

J. MORRISON HUTCHESON, M.D., *Chairman*

RICHARD P. BELL, JR., M.D.

J. D. ZYLMAN, M.D.

### Medical Service

During the year, the Committee on Medical Service has been actively considering various problems currently of State and National interest in this area.

On January 5, 1954, its subcommittee on Indigent Care sponsored a state-wide meeting in Richmond, jointly arranged by The Medical Society of Virginia and the Virginia Council on Health and Medical Care. Invited to this assembly were representatives of local medical societies, welfare groups. Boards of Supervisors, and others concerned with the care of this important group. Upwards of 250 individuals attended. Discussion concerning the operation of our State plan, possible future developments, and the difficulties involved were taken by individuals having experience in the field. Constituent medical societies were urged to devote one meeting to the problems of indigent care, inviting like groups to participate.

Members of the Health Insurance Council, who represent commercial insurance carriers, were present by invitation at several of our meetings for discussion of mutual interests. In the opinion of our Committee, this liaison should be maintained. The report of the subcommittee on Prepayment Insurance follows: "Realizing that the high cost of medical care has resulted in a feeling of resentment by the general public against physicians as a group, this committee has been instructed to look into

the advisability of gathering and publishing an average fee schedule throughout the State of Virginia.

It is the feeling of the subcommittee, as well as the Medical Service Committee as a whole, that such an average fee schedule is not practical and would actually be harmful to many physicians and probably cause more misunderstandings between physicians and their patients. The reason for this feeling is that from our studies it has been shown that the variation in fees for similar procedures varies geographically more than on any other basis, and what would be considered a fair or ordinary fee in one part of the state, would be much too high in another part of the state and vice-versa. For this reason, the idea of gathering and publishing a fee schedule for the State of Virginia has been dropped.

In place of this, it has been suggested that each component of the State Medical Society appoint a committee to find out the average fees charged in their respective localities and that the members of each component Medical Society be given a list of these fees for their own use with the understanding that such a fee is to be charged unless the patient is told before treatment that the charge will be in excess of the average.

It is further thought that this schedule can be given to the State Insurance Commission and various insurance companies who are interested in selling health coverage so that their policies may be fitted to cover the needs of the patients.

It is the feeling of the subcommittee that such a plan is entirely feasible and that the House of Delegates would be asked to endorse the plan and to set up machinery by which each component society will be made aware of these suggestions and begin to act upon them as soon as possible." This material should be considered at our next State meeting.

Our Committee urges the profession to cooperate with Blue Cross and Blue Shield to prevent abuse through the over-utilization of these services. Their continued success merits the thoughtful consideration of every member of the medical profession. We have kept in close touch with legislation developing in the Congress on various types of health insurance.

The activities of the subcommittee on Rural Health follows: "The activities of the subcommittee on Rural Health this past year were twofold: (1) It acted in an advisory capacity to the Steering Committee of the Virginia Council on Health and Medical Care in its Orange County Health-Inventory Study. (2) It arranged a panel discussion meeting between representatives of the State Medical Society, the Virginia Council on Health and Medical Care, and leaders of the different farm organizations. This meeting was held as a part of the Institute of Rural Affairs at Virginia Polytechnic Institute and lasted two hours. Topics covered were the facilitating of medical service through better cooperation between doctors and the public, the utilization of the resources of preventive medicine through public health work and private practice, and a preliminary report on the results of the Orange County Health Study towards improving rural health. Discussion at the meeting was spirited, and it is

felt that much good in improving mutual relationships between physicians and rural population was accomplished." We recommend that our Society continue to concern itself with the ever present problems presented in carrying medical service to the rural people.

The subcommittee on Industrial Health conducted a survey to determine the interest of our profession in the industrial health field. From its findings, we believe that it is well worth while at some future date to hold a state-wide meeting to bring before the physicians of the State some of the pertinent problems involved in this type of practice.

It was decided to recommend to the State Department of Health that an exhibit on industrial medicine be prepared for the 1955 annual meeting. The exhibit could emphasize the types of service which can be rendered physicians in plants throughout the state.

A follow-up is planned with respect to the possibility of the State Department of Health employing a full-time director for the Department of Occupational and Industrial Medicine.

We are pleased that the Society was represented at the meeting of the Council on Industrial Medicine, which was held this year in Louisville.

Chronic illness deserves especial mention. Large segments of the population whose life span has been increased make this area of service a real challenge. The ravages of diseases, such as rheumatic heart disease, polio, spastic paralysis and others in the young are also of great importance. National interest is evidenced by the work being done by the Commission on Chronic Illness. More recently Congress has recognized this field by appropriating money to be used for this particular purpose under the auspices of the Hill-Burton Act. Liaison with the Virginia Council on Health and Medical Care, the State Health Department and the Virginia groups has already been established to meet this challenge.

One of our most interesting meetings was held in Williamsburg, where an opportunity was had to visit the Patrick Henry Hospital for Chronic Disease, which is an on the spot view for this stimulating successful demonstration of community cooperative effort to do something for elderly people with chronic disease. We recommend your careful consideration of this subcommittee report: "(1) There is a pressing need for adequate facilities in Virginia to care for an ageing population and the chronically ill. (2) A hospital to render the service should be closely allied with a general hospital to insure adequate medical services and at the same time afford economical care. (3) The facility for the chronologically ill is a local problem and it should be recognized by the locality and assumed as a local responsibility free of government control and interference. (4) The locality served should be limited by the interest of the people in the institution, for its support and operation will depend on gifts and donations if its operation is to be kept under the revenue derived from patients. (5) It is suggested that other sections of Virginia would profit by the experience of the Patrick Henry Hospital for the Chronically Ill. The authorities of that institution have offered its entire op-



erations for study and its experience to other localities that may desire to establish such an institution."

Hospital-physicians relationships were considered, and the report of that subcommittee points out that 73 hospitals in Virginia have been surveyed and that 54 are fully accredited, 13 provisionally accredited and 6 not accredited. It is believed that physician in hospitals should unite their efforts in a campaign to make sure that all hospitals meet the requirements of the Joint Commission on Accreditation.

We were fortunate in having members of the A.M.A. Council on Medical Service Staff at several of our meetings to give us advice and help.

Finally, the Chairman would like to convey to every member of our Committee as well as those of the subcommittee his appreciation of the time and effort in tackling the problems presented. It is heartening to find such devotion to the profession. More of us must face issues involved in medical service and show the public that we are aware of the gaps to be filled in this area.

H. B. MULHOLLAND, M.D., *Chairman*

J. G. GRAZIANI, M.D.

F. A. FARMER, M.D.

T. B. MCCORD, M.D.

C. L. SAVAGE, M.D.

R. V. BUXTON, M.D.

KINLOCH NELSON, M.D.

J. P. WILLIAMS, M.D.

H. M. FRIEDEN, M.D.

S. C. HALL, M.D.

### Membership

The Committee on Membership of The Medical Society of Virginia had no matters referred to it during the year, and consequently no meetings were held.

It is always gratifying to welcome into the Society those members admitted through their component societies since the last annual meeting. They are as follows:

Dr. Avis Branch Adams, Emporia  
 Dr. James Belt Adams, Emporia  
 Dr. Lloyd Campbell Agnew, Lynchburg  
 Dr. William Cooke Andrews, Norfolk  
 Dr. Franklin Lynwood Angell, Roanoke  
 Dr. Rolf Gunther Baginsky, Martinsville  
 Dr. Clifford Edward Bagley, Arlington  
 Dr. Allston Gibbes Bailie, Richmond  
 Dr. William Francis Barry, Clifton Forge  
 Dr. Ernest Lovell Becker, Randolph AFB., Texas  
 Dr. Houston Leshner Bell, Roanoke  
 Dr. Eugene Bene, Norton  
 Dr. Rack Foy Benthall, Alexandria  
 Dr. Wesley Clifford Bernhart, Annandale  
 Dr. Gordon Gilbert Birdsong, Franklin  
 Dr. James Currie Blair, Imboden  
 Dr. William Francis Blair, Norfolk  
 Dr. Elam Withrow Bosworth, II, Lexington  
 Dr. Walter Joseph Brennan, Jr., Petersburg  
 Dr. Carl Ashton Broadus, Newtown  
 Dr. Milton Henry Brockmeyer, Pulaski  
 Dr. Henry Armistead Bullock, Jr., Richmond

Dr. Henry Griffin Bullwinkel, Fredericksburg  
 Dr. Frank A. Carroll, Alexandria  
 Dr. Warren Smoot Carter, Winchester  
 Dr. Leah Huntley Cate, Brightwood  
 Dr. Gordon Frank Cavell, Victoria  
 Dr. Charles David Cawood, Middlesborough, Ky.  
 Dr. Claire Althea Christman, Arlington  
 Dr. Vernon Lonsdale Cofer, Jr., Norfolk  
 Dr. George Henry Cook, Chincoteague  
 Dr. Robert Raymond Cook, Jr., Norfolk  
 Dr. Armando Ralph Coppola, Newport News  
 Dr. James Wendel Creef, Norfolk  
 Dr. Hubert Dinwiddie Crow, Fredericksburg  
 Dr. Charles Harper Crowder, Jr., South Hill  
 Dr. Alfred Mills Decker, Jr., Richmond  
 Dr. Adrian Joseph Delaney, Alexandria  
 Dr. Chester William Dewalt, Jr., Virginia Beach  
 Dr. Clara King Dickinson, Marion  
 Dr. Austin Ingram Dodson, Jr., Richmond  
 Dr. George Edward Ewart, Richmond  
 Dr. Cyrus Creston Farrow, Jr., Norfolk  
 Dr. Louis Zephirin Fautoux, Jr., Falls Church  
 Dr. Ernesto Fessel, Richmond  
 Dr. Gerald John Fisher, Arlington  
 Dr. Marion White Fisher, Sandston  
 Dr. Robert Irving Fleming, Amonate  
 Dr. James Stephenson Foster, Jr., Dante  
 Dr. Hugh Ross Fraser, Smithfield  
 Dr. John David French, Pearisburg  
 Dr. Milton David Friedenbergh, Richmond  
 Dr. Asher Arthur Friedman, Norfolk  
 Dr. Lois Fox Fryer, Arlington  
 Dr. James Wilson Fullerton, Tazewell  
 Dr. Robert Barnett Gahagan, Norfolk  
 Dr. Earle Carlton Gates, Chester  
 Dr. Harold Louis Goldman, Norfolk  
 Dr. Harvey Winfrey Goode, Jr., Dinwiddie  
 Dr. Samuel H. Gould, Hopewell  
 Dr. Jerome Stanley Gross, Norfolk  
 Dr. George Parker Hand, Jr., Norfolk  
 Dr. Roy Belmont Hargrove, Jr., Farmville  
 Dr. Kirby Thompson Hart, Jr., Petersburg  
 Dr. Forrest Moseley Haswell, South Boston  
 Dr. Benjamin Hines Harrison, Hampton  
 Dr. Joseph Haven Hoge, Sandston  
 Dr. James Reuben Holsinger, Luray  
 Dr. Mark Edgar Holt, Jr., Petersburg  
 Dr. Charles Perry Howze, Charlottesville  
 Dr. George William Hurt, Roanoke  
 Dr. William Robert Irby, Richmond  
 Dr. Harold Joseph Jacobs, Jr., Norfolk  
 Dr. Robert McClain Jamison, Covington  
 Dr. Julio Jimenez-S, Stuarts Draft  
 Dr. Francis Seymour Jones, Norton  
 Dr. Arthur Sanford Kaplan, Norfolk  
 Dr. Lee Norman Kastner, Portsmouth  
 Dr. Saul Kay, Richmond  
 Dr. Eusebius Milton Kellam, Nassawadox  
 Dr. John Wise Kellam, Belle Haven  
 Dr. Earle Jerome Kerpelman, Norfolk

Dr. Joseph A. Kiesel, Arlington  
 Dr. Robert Gillis Kindred, Charlottesville  
 Dr. Richard Horace Kirkland, Richmond  
 Dr. William Joseph Kucewicz, Norfolk  
 Dr. Robert A. W. Latimer, Manassas  
 Dr. James John Lawson, Jr., New Market  
 Dr. Herbert Murray Levitt, Petersburg  
 Dr. Eugene Bell Linton, Altavista  
 Dr. Murdo Macaulay Mackay, Clifton Forge  
 Dr. Franklin Martin, Jr., Charlottesville  
 Dr. George Vincent Martin, Norton  
 Dr. Charles Webster Massey, Richmond  
 Dr. Charles Francis McCaffrey, Arlington  
 Dr. Dennis Parfremont McCarty, Front Royal  
 Dr. Robert Burns McEwen, Wakefield  
 Dr. Thomas Francis McGough, Alexandria  
 Dr. Maurice Albert Michael, Suffolk  
 Dr. James DeWitt Mills, Jr., Alexandria  
 Dr. Philip Lee Allen Minor, Richmond  
 Dr. Arthur Vernon Mitchell, Arlington  
 Dr. Cary Nelson Moon, Jr., Charlottesville  
 Dr. Ray Atkinson Moore, Jr., Hampden-Sydney  
 Dr. Helen Luella Morton, Richmond  
 Dr. James Mercer Moss, Alexandria  
 Dr. William Francis Murphy, Jr., Norfolk  
 Dr. John Alexander Murray, Franklin  
 Dr. Donald Stover Myers, Hot Springs  
 Dr. Sigmund Newman, Arlington  
 Dr. George Maynard Nipe, Harrisonburg  
 Dr. James Lee Northington, South Hill  
 Dr. John Anthony Opal, Bristol  
 Dr. William Joseph O'Rourke, Richmond  
 Dr. Maysville Jane Page, Richmond  
 Dr. Robert Edward Paine, Jr., Salem  
 Dr. Carl Putnam Parker, Jr., Falls Church  
 Dr. John Legerwood Patterson, Richmond  
 Dr. Francis Robert Payne, Jr., Petersburg  
 Dr. Carroll A. Peabody, Petersburg  
 Dr. Julius Peerless, Norfolk  
 Dr. Robert Mason Phillips, Chester  
 Dr. Norman William Pinschmidt, Richmond  
 Dr. Daniel Wells Pratt, Charlottesville  
 Dr. Douglas Theodore Prehn, Arlington  
 Dr. Ralph Price, Warwick  
 Dr. John Stuart Prince, Emporia  
 Dr. Oliver James Purnell, Richmond  
 Dr. Rupert Wilson Quaintance, Jr., Culpeper  
 Dr. Stuart Ragland, Jr., Richmond  
 Dr. John Lewis Read, Richmond  
 Dr. Delbert Joseph Richard, Alexandria  
 Dr. William Clayton Robertson, Jr., Portsmouth  
 Dr. Paul Ward Robinett, Portsmouth  
 Dr. Henry Moore Rogers, Jr., Norfolk  
 Dr. Frederick William Rook, Arlington  
 Dr. Sidney Rosenbaum, Arlington  
 Dr. Edward Howard Scherr, Richmond  
 Dr. Eugene William Senter, Salem  
 Dr. Robert Dayton Shreve, Altavista  
 Dr. Homer Alden Sieber, Roanoke  
 Dr. Edward Valentine Siegel, Newport News

Dr. Harvey Daniel Smallwood, Charlottesville  
 Dr. Catherine Wood Richard Smith, Abingdon  
 Dr. John Earle Smith, Highland Springs  
 Dr. James Hal Smith, Christiansburg  
 Dr. Russell Smith, Piney River  
 Dr. Norman Sollod, Petersburg  
 Dr. Charles Hallacy Spencer, Clinchco  
 Dr. Peter Weaver Squire, Emporia  
 Dr. Carl Ellroy Stark, Wytheville  
 Dr. Thomas Weir Stewart, Lynchburg  
 Dr. Spottswood Douglas Stoddard, White Stone  
 Dr. William H. Stout, Hopewell  
 Dr. Charles Franklin Tate, Jr., Charlottesville  
 Dr. Gervas Storrs Taylor, Jr., Norfolk  
 Dr. Harry Baylor Taylor, Jr., Norfolk  
 Dr. William Sanford Terry, Portsmouth  
 Dr. John Samuel Thiemayer, Jr., Norfolk  
 Dr. Acors William Thompson, Falls Church  
 Dr. Oscar Andreas Thorup, Jr., Charlottesville  
 Dr. Robert Henry Thrasher, Norfolk  
 Dr. Thomas Roper Travis, Montross  
 Dr. George Edward Troxel, Winchester  
 Dr. Grattan Howard Tucker, Jr., South Hill  
 Dr. Jesse Miller Tucker, Jr., Huddleston  
 Dr. Harold T. Turner, Narrows  
 Dr. Frederik Marie Van den Branden, Denbigh  
 Dr. John Heath Vaughan, Richmond  
 Dr. Ruth Vingiello, Blacksburg  
 Dr. Fred Walls, Jr., Richmond  
 Dr. Benjamin Boisseau Weisiger, III, Alexandria  
 Dr. W. Leonard Weyl, Arlington  
 Dr. William Harvey Whitmore, Jr., Norfolk  
 Dr. Philip Abney Wilhite, Jr., Portsmouth  
 Dr. David H. Williams, Boissevain  
 Dr. William Overton Winston, Portsmouth  
 Dr. Henry Wise Wood, Norfolk  
 Dr. John Julius Yaeger, Lexington  
 Dr. James Robert York, Berryville  
 Dr. Charles Merriwether Zacharias, Richmond  
 Dr. Francis Louis Zinzi, Arlington

The Committee takes pleasure in recommending for honorary membership in The Medical Society of Virginia our distinguished retiring President, Dr. Vincent W. Archer, Charlottesville.

GEORGE W. LEAVELL, M.D., *Chairman*  
 JAMES A. THWEATT, M.D.  
 HENRY J. LANGSTON, M.D.

### Public Relations

Medical public relations activity in Virginia reached a new high during the past year, and much of the credit belongs to the PR committees of component medical societies. Never before have the component societies been so active and never before have the results been so gratifying.

The 1953-54 PR program was officially ushered in with the Annual *Public Relations Conference*, which was held in Richmond on November 24. One of the big PR needs stressed at the Conference was that of a strong, active

*Auxiliary*, and it is a real pleasure to report that two new component auxiliaries have been organized.

Auxiliary PR efforts received an additional boost with the appointment of Mrs. R. M. Reynolds, Norfolk, as *Public Relations Chairman of the Woman's Auxiliary to the American Medical Association*.

A PR project strongly recommended at the Conference was the presentation of *Public Medical Forums*, and at least three Virginia cities—Lynchburg, Norfolk, and Alexandria—had forums sponsored by their medical societies. It is quite likely that forums will be presented in Richmond and Newport News sometimes this fall. Forums already staged attracted "standing room only" attendance, and the matter of finding meeting halls with the necessary seating capacity was not easy.

*Radio and TV public relations* were also stressed, and the Committee believes that great strides have been made in these fields. Since the first of the year, 300 programs totaling 75 hour have been aired. Lynchburg and Norfolk were scenes of particular activity, although just about every section of the state was covered to some extent.

At the present time, 18 radio stations are carrying radio PR programs. One of these (WMBG—Richmond) is carrying a daily program. It seems fairly safe to predict that 25 stations will be using our programs certainly by the first of the year. Such a radio public relations program is possible only because The Medical Society of Virginia has been designated a transcription distribution center by A.M.A. More than 60 series of transcriptions are now available from the state office.

Six TV stations have gone all out to telecast the many excellent medical PR films made available by the Society. Thus far, 17 programs have been telecast—a total of 8 hours.

The Committee initiated a new project involving the distribution of sound public relations literature through the medium of *community welcome wagons*. Although this had been done in several localities (notably Lynchburg and Arlington), it had never before been attempted on a state wide basis. Welcome wagon supervisors in 16 communities have been contacted and the project cleared with the various component societies. Already, newcomers to 12 communities are receiving information about the importance of securing a family physician, etc. This could easily become the most worthwhile of all PR activities.

In an effort to assist and stimulate component societies in their public relations activities, a *PR handbook* was compiled and sent all public relations chairmen.

An undertaking of considerable importance, not only in Virginia, but the entire nation, got under way in the Fredericksburg area. A *crash injury research project*, sponsored by the Cornell University School of Medicine, is being conducted with the cooperation of The Medical Society of Virginia, the State Department of Health, and the State Police. The public relations significance cannot be overlooked. Here is a positive approach to good public relations, and the Fredericksburg Medical Society is to be congratulated for its complete cooperation in supplying the medical data needed to insure the project success. It is hoped that other medical societies will give the

same cooperation should the project be shifted to their areas.

*Current Currents*, the PR newsletters, continued to be sent the membership each month. In addition, eight *Bulletins for Office Personnel* were sent out and continued to receive a good response. Present policy is to include, with each issue of *Current Currents*, a copy of some important piece of literature available in quantity from the state office.

In this connection, the Committee has been waging a real campaign to get our members to display and otherwise utilize the very informative *pamphlets, booklets, reprints*, etc. available for the asking. A *traveling exhibit* was used to publicize the material at meetings of component societies and special mailings were employed in some instances. As a result, a record breaking 40,600 pieces of literature have been distributed during the year.

An exhibit entitled "Health 1953" was presented at the Atlantic Rural Exposition, and once again, it was the cooperation of the Woman's Auxiliary to the Richmond Academy of Medicine that made it possible. It is estimated that 125,000 visitors viewed the exhibit over a nine day period.

During its last meeting, your Committee arranged the program for the next State-wide *Public Relations Conference*, which will be held at Charlottesville's Hotel Monticello on November 18. We cannot emphasize enough the importance of having every component society well represented.

Although much has been accomplished in public relations during the past twelve months, the Committee realizes only too well that the surface has barely been scratched. Good medical public relations will exist in Virginia only when each physician takes it upon himself to be a public relations committee of one. Remember—PR means *Personal Responsibility*.

JAMES P. KING, M.D., *Chairman*

BENJAMIN W. RAWLES, M.D.

JOHN W. DAVIS, JR., M.D.

MASON C. ANDREWS, M.M.

H. C. BATES, JR., M.D.

FRED D. MAPHIS, M.D.

### House

Your House Committee is pleased to announce that in October 1953, the Virginia Mental Hygiene Society moved to an unoccupied room on the second floor of the headquarters building of The Medical Society of Virginia. We are also glad to report that both categories of expenditures at 1105 West Franklin Street, viz.:—Building Repair and Building Maintenance, have fallen well within the respective budgets for these items.

Five hundred dollars was set aside to cover building repairs and \$66.00 has been spent. This was expended to replace a warped and weakened wooden pillar supporting the second story of the back porch and several planks on this porch which were rotting and presenting a hazard to life and limb.

Two thousand-five hundred dollars was budgeted for



Building Maintenance. The largest non-predictable expense this year was the need to paint the entire exterior wood and iron work, the roof, and the rather drab second floor rear hall way and the back stairs at a total cost of \$575.00.

The following more or less routine expenditures were also incurred during the past year:—

Utilities (light, gas & water)	\$ 290.53
Supplies (Janitorial & Housekeeping)	161.96
Fuel	275.39
Fire Insurance	25.00
Upkeep (Includes painting as stated above)	750.52
Janitor's Salary	981.63
Taxes on Property	323.40
	<hr/>
	\$2807.91

Fortunately the two headquarters offices occupied on the second floor by the Virginia Academy of General Practice and the Virginia Mental Hygiene Society contributed \$630.00 toward the building maintenance and this reduced the total cost to \$2177.91, which was well within the past year's budget.

DONALD S. DANIEL, M.D.

FLETCHER J. WRIGHT, JR., M.D.

HARRY J. WARTHEN, JR., M.D., *Chairman*

### Child Health

The committee has met twice—in Roanoke in October and at Hot Springs in February.

The study has continued of the deaths of premature infants who were born at home. The circumstances of each case are assembled by the staff of the State Health Department and members of our committee have then expressed an opinion as to whether the death was preventable and, if so, how it could have been prevented. The results of these studies are being used in planning further measures for the care of the newborn. It is the feeling of the committees that this work should continue as it offers hope of reducing premature infant mortality.

A chart is presented which shows the trend of infant mortality rates in Virginia for the years 1942-1953. The total Virginia rate of 32.4 in 1953 is significantly higher than the United States rate of 27.8. When the Virginia rate is broken down to show the effect of color, the white

rate is seen to be 27 in striking contrast to the much higher rate of 47 for the colored population.

These figures speak for themselves and show the need for improved infant care, especially for the colored. No one today knows what the irreducible minimum of infant mortality may be, but one fact is certain—any rate for a state or city which is higher than the rate for another state or city indicates that some babies there are dying unnecessarily and that the rate in question is not yet at the irreducible minimum.

Together with several other interested organizations the committee sponsored the Institute of Premature Care which was held in Richmond on April 1st and 2nd, 1954. More than 200 nurses from all over the State who deal with newborn and premature infants made up a receptive and enthusiastic audience.

The committee is promoting the new Manual of New-born Care which has been published by the American Academy of Pediatrics as the standard reference book for all hospital nurseries in the State. We feel that the adoption of this outline of procedures and safeguards would materially reduce neonatal mortality.

An improved program where health services are more universally obtainable by the school age child from his own physician is now under study. In cooperation with the State Health Department we are also formulating plans for medical care of the child who cannot or will not go to his own physician. This is to be done through school health service clinics run by clinicians picked from a panel of local physicians. We are particularly interested in improving methods of screening school children for defects and in more effective follow-up by which defects can be corrected promptly. We feel very strongly that large scale health round-ups as presently carried out, with their necessarily superficial examinations are a waste of time both for the patient, the physician, and the attending nurse.

McLEMORE BIRDSONG, M.D.

EDWIN KENDIG, M.D.

PAUL HOGG, M.D.

JOHN WAKE, M.D.

JOHN RYDEEN, M.D.

WILLIAM CHAPIN, M.D.

EDWIN HARPER, M.D., *Chairman*

### To Confer with the State Board of Nurse Examiners

The Committee to Confer with the State Board of Nurse Examiners appointed by Dr. Vincent W. Archer, President of The Medical Society of Virginia, 1953-4, has, at the time of this writing, had no formal meetings and has had no request, either from physicians or nurses, to consult.

RUSSELL V. BUXTON, M.D.

JAMES M. HABEL, M.D.

MALCOLM H. HARRIS, M.D.

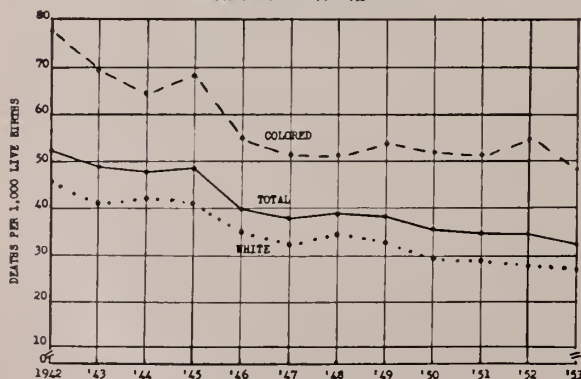
FRANK JOHNS, M.D.

EUGENE L. LOWENBERG, M.D.

JOHN A. SHACKELFORD, M.D.

C. BRUCE MORTON, 2ND, M.D., *Chairman*

TREND OF INFANT MORTALITY IN VIRGINIA, BY COLOR,  
FOR THE YEARS 1942-1953



### Venereal Disease Control

The Venereal Disease Committee of The Medical Society of Virginia recommends the establishment of a state supervised laboratory for the performance of the T.P.I. test or a similar test for the detection of syphilis for the benefit of all physicians in Virginia.

WILLIAM H. KAUFMAN, M.D.

HARRY PARISER, M.D.

ALLEN PEPPELE, M.D.

W. R. SOUTHWARD, JR., M.D.

J. W. LOVE, M.D., *Chairman*

### Tuberculosis

One meeting has been held which was attended by most of the committee. Those who were not present were contacted by mail in regard to any ideas they might have on the control of tuberculosis in Virginia. During the past several years there has been marked activity on the part of the Virginia Tuberculosis Association with the survey of the tuberculosis facilities of the entire state. This culminated in certain recommendations to the Legislature which were partially adopted at its last meeting. The Governor's Advisory Committee was also appointed by Governor Battle and this committee functioned for about one year. Since Governor Stanley came into office, this committee has not yet been appointed. It is recommended that the House of Delegates recommend to Governor Stanley that the Advisory Committee on Tuberculosis be again set up. New recommendations should be made for the next meeting of the State Legislature.

E. C. DRASH, M.D., *Chairman*

### Mental Hygiene

The Mental Hygiene Committee of The Medical Society of Virginia has not functioned with the vigor equal to that of your committee of 1953, under the chairmanship of Dr. David C. Wilson. Our only meeting was held in Richmond on July 30, 1954. In general, the objectives of the committee are in accord with the objectives as outlined in the 1953 report.

Our committee received a report from the chairman of the Special Committee on Blue Cross-Blue Shield Hospital Insurance for patients suffering from emotional and mental disorders. Since the State Corporation Commission's action was unfavorable toward insurance coverage for psychiatric patients, it was recommended that the special committee, under the chairmanship of Dr. J. R. Saunders, be continued and that the Commission be written a letter embodying their recommendation of last year. A copy of this letter is to be sent to Dr. Vincent W. Archer, President of The Medical Society of Virginia, and to Dr. Richard J. Ackart, Executive Director of the Virginia Hospital Service, Incorporated. This letter will, in addition, request that a representative of this committee be allowed to be present at the next meeting, or hearing, that deals with insurance coverage of psychiatric patients.

Our committee sponsors more substantial support of the Mental Health Association of Virginia by the medical profession throughout the state. For the past year this

organization has carried on a well planned educational program and has maintained an office in The Medical Society of Virginia Building at 1105 West Franklin Street, Richmond, Virginia.

During the past year the Mental Health Association of Virginia has retained a full time executive officer for the first time in its sixteen years of existence. The initial financial burden on the organization has been unusually heavy. Our committee unanimously recommended that The Medical Society of Virginia donate office rent (\$30. per month) to the Mental Health Association of Virginia for a period of one year retroactive from July, 1954.

A suggestion was made and approved, to the effect that a plan be worked out with the Department of Mental Hygiene and Hospitals to better inform the physicians throughout the state with the commitment laws.

Our committee was informed that the Richmond Academy of Medicine was sponsoring a series of medical forums with the cooperation of The Richmond Times-Dispatch and Radio Station WRNL. Our committee endorsed this plan and approved a further suggestion that we request the Publicity Committee of the Richmond Academy to have their first program on Mental Health.

There was considerable discussion of the nursing home situation throughout the state. The question was raised as to the responsibility for the medical and psychiatric care of patients in these institutions. Our committee recommends that The Medical Society of Virginia authorize a survey sufficient to determine the status of the care and treatment of patients in nursing homes and further to establish standards both as to the medical and psychiatric supervision of the patients in nursing homes.

During 1953, the committee on Mental Health of the American Medical Association, with the approval of the Board of Trustees of the American Medical Association, established a sub-committee on alcoholism. There has been considerable correspondence and communication between the secretary of the sub-committee on alcoholism of the American Medical Association and the committee on Mental Health of The Medical Society of Virginia. We were urged to establish a similar committee in our state. In addition, the sub-committee of the American Medical Association was particularly interested in our mental health program in Virginia, as outlined in our report of last year. They felt that Virginia had an outstanding program and wanted a representative from our committee to have a prominent place on their program. Dr. David C. Wilson was appointed chairman of our sub-committee and will be on the program at a meeting being held in Chicago, Illinois, at the American Medical Association's headquarters on September 17th and 18th, 1954. One objective of this meeting in Chicago is to get all the state medical societies to develop a more definite program relative to the alcoholic problem. A written report on this meeting cannot be made until the annual meeting of The Medical Society of Virginia in 1955.

REX BLANKINSHIP, M.D., *Chairman*

DAVID C. WILSON, M.D.

JAMES K. MORROW, M.D.  
 JOHN R. SAUNDERS, M.D.  
 C. T. WILFONG, M.D.  
 JOSEPH R. BLALOCK, M.D.  
 EDWIN J. PALMER, M.D.  
 THOMAS N. SPESSARD, M.D.  
 JOHN POWELL WILLIAMS, M.D.  
 JOHN A. SIMS, M.D.  
 SNOWDEN C. HALL, M.D.  
 THOMAS H. ANDERSON, M.D.  
 THOMAS S. EDWARDS, M.D.  
 ALEXANDER G. BROWN, III, M.D.  
 JOHN B. MCKEE, M.D.  
 W. S. HOOTEN, M.D.  
 LANDON E. STUBBS, M.D.

### Cancer

The Cancer Committee received last fall an advisory report from the American College of Surgeons' Inspector after his visit to some of the Tumor Clinics certificated by the Committee. After a review of the report, in conjunction with the usual annual reports from the clinics, all old clinics were extended re-certification for the year, October, 1953 - October 1954.

Since last October, the Norfolk Diagnostic Tumor Clinic has disbanded. As a result, three applications for new clinics were received and approved by the Committee. These are the DePaul Hospital Tumor Clinic of which Dr. Harold J. Jacobs is Director, the Norfolk General Hospital Tumor Clinic—Director Dr. Arnold J. Rawson, and the Portsmouth Diagnostic Tumor Clinic with Dr. Lemuel E. Mayo the Director. In addition, two other new clinics have been organized and approved—The Dixie Hospital Tumor Clinic at Hampton with Dr. W. H. Parker and Dr. F. A. Kearney as co-Directors, and the Norton Diagnostic Tumor Clinic of which Dr. C. L. Henderson is the Director. Eighteen clinics holding certification from The Medical Society of Virginia through this Committee are now in operation, and there is interest in organizing others in several areas.

The Committee has published a series of Cancer Bulletins in the Virginia Medical Monthly.

The Committee has been called on for advice about policies concerning services rendered to cancer patients by the Virginia Division of the American Cancer Society, the details of which are recorded in the Minutes of the Committee meetings.

A. B. GATHRIGHT, M.D.  
 JOS. W. HOUCK, M.D.  
 NELSON SMITH, M.D.  
 CHAS. H. PETERSON, M.D.  
 F. D. DANIEL, M.D.  
 A. P. JONES, M.D.  
 MASON ROMAINE, M.D.  
 J. J. GIESEN, M.D.  
 J. R. KIGHT, M.D.  
 A. C. WYMAN, M.D.  
 GEO. ZUR WILLIAMS, M.D.  
 GEORGE COOPER, JR., M.D., *Chairman*

### Rehabilitation

The Rehabilitation Committee, which also serves as the Professional Advisory Committee for the Vocational Rehabilitation Service, State Department of Education, has been actively engaged in its regular functions during the past year.

The members of the Committee, both individually and collectively have rendered consultative services to the staff of the Rehabilitation Agency throughout the year. Professional advice was given on many individual cases involving complicated medical problems. Also, the Committee has provided to the Agency professional guidance in regard to the professional fee schedule and operational procedures and policies pertaining to physical restoration.

A regular meeting of the Committee was held on May 2, 1954 at the John Marshall Hotel. In addition to official Committee members, those present were: R. N. Anderson, Director, Vocational Rehabilitation and Special Education; Dr. J. M. Mennell, Dr. John M. Stirewalt, and F. O. Birdsall of Woodrow Wilson Rehabilitation Center; Corbett Reedy and Floyd H. Armstrong of the State Rehabilitation Service; and E. H. Buckman, Film Production Service, State Department of Education. Drs. A. Ray Dawson and E. E. Haddock were presented as new members of the Committee.

A report on Woodrow Wilson Rehabilitation Center was presented which revealed substantial progress in average enrollment and services provided to disabled persons by this facility during the past year. Also, an interesting report was submitted by Dr. Frank B. Stafford, Superintendent, on the progress made in broadening the Rehabilitation Unit at Blue Ridge Sanatorium and projected plans for the future.

The Committee viewed the film, THE REHABILITATION STORY, which was produced by the Film Production Service of the State Department of Education and depicts the services rendered by the State Rehabilitation Agency. The Committee feels that it is an excellent film and commends it to medical groups for local showings.

ROY M. HOOVER, M.D., *Chairman*  
 GEORGE A. DUNCAN, M.D.  
 J. R. BLALOCK, M.D.  
 LEROY SMITH, M.D.  
 FRANK B. STAFFORD, M.D.  
 W. E. DICKERSON, M.D.  
 G. S. FITZ-HUGH, M.D.  
 FLETCHER J. WRIGHT, M.D.  
 A. L. CARSON, JR., M.D.  
 RENO PORTER, M.D.  
 EDWARD E. HADDOCK, M.D.  
 CHARLES L. SAVAGE, M.D.  
 A. RAY DAWSON, M.D.

### Cerebral Palsy

There has been a gradual increase in services for cerebral palsy patients throughout the state. It is recognized that there are close to 30,000 patients so affected. This is a number comparable to the polio cases present in



the state. In the past, however, these patients have not been given the consideration which they deserve. They were considered mentally deficient and there appeared to be little hope for rehabilitation. This concept, however, has changed greatly in the past ten years. In spite of their physical disability many of them are found to be mentally normal.

Whereas no section of the state of Virginia was offering any appreciable amount of service to these patients ten years ago, it appears now that in practically all parts of the state they are receiving attention from orthopedists, neurologists and others. Many of these patients are being hospitalized and given physical therapy, surgery and other services which appear to be helpful. Under the State Crippled Children's Program, payment is being made to hospitals for room and board. The Virginia Society for Crippled Children and Adults also supports hospitalization for a number of these patients. The United Cerebral Palsy Society is also functioning in this state.

In the Northern Virginia Area, the Arlington Crippled Children's Program is offering an excellent program. The cerebral palsy patients receive not only orthopedic care, but services from various consultants. Physical and occupational therapy is offered to them. The Crippled Children's School which is in the same building offers real educational opportunities. The description of this building is offered so that other communities may consider using it as an example for future expansion in the field of cerebral palsy.

There is contained in the building three clinic rooms, an exercise room, two demonstration rooms, an occupational therapy department, a special woodworking department, an office for speech therapy, two nurses offices and a waiting room. The cerebral palsy cases are part of the Crippled Children's Program and utilize this building. In the physical therapy department routine cerebral palsy equipment is present such as relaxation chairs, standing tables, parallel bars, exercise steps, etc. There are two whirlpool tanks, and a Hubbard Tank will be installed in the near future.

All records are typewritten and there is a full time secretary. Files are kept of the patient's records, of his x-rays and there is an index card system. The cafeteria is used by any and all who are spending a greater portion of their day in the building. For example—the children in the socialization demonstration unit and children who are transported for a distance of 50 to 60 miles and who are spending from 4 to 6 hours at a clinic session. At the present time there is no cooking done in the cafeteria, but for the socialization group who are here regularly, food is brought in for serving. Other children bring their food with them and have access to the stove, refrigerator etc. The cafeteria is also used for the storage of cots for patients who are here for a sufficient time that rest periods are indicated.

In the demonstration rooms, occupational therapy for teaching daily activities has proven valuable. With a brain damaged child it is necessary for him to have hours

of concentrated effort in teaching him to feed himself, button and unbutton his clothing, tie his shoes and other activities done by the normal child by instinct, or ordinary development by age. In one of the demonstration rooms it has been found necessary to observe, socialize, motivate and evaluate before the orthopedist can obtain results from his recommendations for physical therapy, gait training etc. This motivation is accomplished by bringing to the child group activities through music, the use of special equipment etc. An effort is made to bring out in each child his individual potentialities and make him aware of same. In another demonstration room, there are children whose conditions have been evaluated and who have been motivated as to their potentialities to cooperate with their treatment, but still have perceptual, conceptual, and/or behavior disorders and are in need of special techniques, other than the usual remedial procedure of teaching. He may, plus his physical neurological disorders, also have visual, hearing, speech and language difficulties. A special designated curriculum is available to these children in addition to their physical therapy, occupational therapy, rest periods etc.

At the Arlington Center it is believed that real progress has been made in cerebral palsy patients; however, it is hoped that with greater opportunities being offered in the field of rehabilitation as a result of recent federal legislation, that earlier and more complete rehabilitation will be accomplished. It is hoped to add a psychologist, vocational guidance counselor and others to the rehabilitation team. It is planned also to function closely with the Anderson Rehabilitation Center located in Arlington.

In Norfolk there is a well established cerebral palsy clinic. The program is handled by the orthopedic surgeons in that area. This community has become increasingly more interested in this program and is contributing greatly in making it an up to date center. The Virginia Society for Crippled Children and Adults functions closely with this program.

In the Richmond area, the Medical College of Virginia has a program for patients handicapped with this disorder. Regular clinics are being held and definite progress is being made. In other parts of the state the cerebral palsy cases are receiving care. The latter clinics have not been established with equipment and personnel to the extent noted in other parts of the state, but the interest of the doctors has increased considerably. The benefits from good orthopedic, neurological and psychiatric care is recognized and it is believed that an expansion of the program is only a matter of time.

Information is not available at this time concerning the program at the University of Virginia at Charlottesville. It is our understanding, however, that a special center is being contemplated for the care of cerebral palsy cases in that area.

Although the care of the cerebral palsy patient is one of the most difficult, these cases are no longer hopeless. Further advances will be made and it is believed that greater interest by the individual communities will prob-

ably be the main factor in providing the attention that these individuals deserve.

O. ANDERSON ENGH, M.D., *Chairman*

### Conservation of Hearing

At the present time the most comprehensive work on the conservation of hearing in Virginia is centered in the state's two medical schools; some efforts are being made to develop a Speech and Hearing Program in Norfolk and in other cities.

At the University of Virginia, under the guidance of Director J. M. Mullendore, Ph. D., and Malcolm B. McCoy, Audiologist of the Speech and Hearing Center, and under the medical supervision of Drs. Fletcher Woodward and G. S. Fitz-Hugh, of the Department of Otolaryngology, University of Virginia Hospital, an active program of audiometric testing, lip reading, speech instruction for hard of hearing, hearing aid evaluation, and auditory training is under way.

In addition, this department conducted a hearing survey of the Martinsville and Scottsville city schools, grades three through seven, and a resurvey of Charlottesville, the second in three years.

In Richmond, at the Medical College of Virginia, the Hearing Conservation activities of the Audiology center are supervised by S. James Cutler and under the medical leadership of Dr. P. N. Pastore of the Department of Otolaryngology.

For the past two years this group has conducted a hearing survey in the Richmond area and carried out the necessary remedial measures. With the help of the Junior League over twenty thousand school children were tested, and over one thousand four hundred children were sent to their private physicians or to the Ear, Nose and Throat clinic for treatment.

At the Audiology Center itself the work consists of audiometric and free field testing, hearing and evaluation, speech correction and reading, counseling and guidance of the hard of hearing patients and parents, and all phases of a complete audiological service.

The committee is interested in promoting additional Hearing Centers in the larger cities, and extending the hearing surveys of school children all over the state.

Efforts should be made to amplify the endeavor of the Richmond group in acquainting the public, over the radio and other media, with the facilities available in Virginia for the Conservation of Hearing.

P. N. PASTORE, M.D.

NEIL CALLAHAN, M.D.

JAMES GORMAN, M.D.

FRED HAMLIN, M.D.

GRANT PRESTON, M.D.

FLETCHER WOODWARD, M.D.

J. H. HOPKINS, M.D.

FRANCIS H. MCGOVERN, M.D., *Chairman*

### Liaison to the United Mine Workers Welfare and Retirement Fund

This Committee has had, to this date, no meetings, since

the one of the American Medical Association on September 13 and 14, 1953.

The Medical Service Committee of the American Medical Association has called the third Annual Conference on Medical Care in the Bituminous Coal Mining Area to be held in Huntington, West Virginia on October 22nd and 23rd. We feel that this is an experimental type of hospital and medical care program involving the bituminous coal worker. The American Medical Association is attempting to cooperate in establishing future policies.

The report on the meeting in Charleston in 1953 has been published previously and the one in October will be submitted accordingly after this meeting.

JAMES P. WILLIAMS, M.D., *Chairman*

KINLOCH NELSON, M.D.

MACK I. SHANHOLTZ, M.D.

JOHN O. BOYD, JR., M.D.

RUFUS P. BRITTAIN, M.D.

H. B. MULHOLLAND, M.D.

### National Emergency Medical Service

During the past year the above committee has carried out the requirements of the civil defense program as outlined in the September 1953 issue of the Monthly. The actual training of civil defense personnel has been started in both orientation and civil defense functions. This training is stressing medical service for natural as well as enemy caused disaster. Equipment and supplies for approximately 120 First Aid Stations has been ordered (most of it received), equipment has been ordered for four mobile emergency hospitals, and personnel therefor appointed by the University of Virginia Hospital, the Medical College of Virginia Hospital, the Winchester Memorial Hospital and two hospitals in Roanoke. It is planned to organize a fifth such hospital in the near future. A manual on Emergency Mortuary Services has been published as has one for Emergency Services and a Manual for Practical Nurses Training is under preparation. In conformance with recommendations of the Medical Advisory Committee of Region II, F.C.D.A., Emergency Medical Services has been made an integral part of the functions of the State and local health departments, and the personnel of such departments participate in these functions.

With the advent of the H-Bomb, certain fundamental policies of emergency medical service must be changed. We must expect greater numbers of casualties, not only from the actual detonation of such a bomb, but also large numbers from the "fall-out" of radioactive particles, which as has been proved, can cover several hundred miles. Under the dispersal plan, advocated by F.C.D.A., the services of all physicians as well as public health doctors, will be greatly needed.

This committee recommends that all of the component societies of The Medical Society of Virginia be requested to give at least one meeting a year, more if possible, to the study of emergency medical services, and the local civil defense plan particularly the expansion of local health services. Cooperation, advice and assistance of the

local medical society will greatly assist in the preparedness plans of the state. Each physician should review the treatments for burns, fractures, lacerations, shock and irradiation, so that should he be called upon for help will be familiar with the plan of the local chief of emergency medical services and what he is attempting to do.

W. R. SOUTHWARD, JR., M.D., *Chairman*

### American Medical Education Foundation

The American Medical Education Foundation Committee for Virginia began the year with one goal—to make sure that contributions to the Foundation from Virginia physicians break all previous records. From all indications, that goal will be accomplished without too much difficulty.

From January through July, our records indicate that \$5,876.19 has been contributed—compared with just over \$3,000 for the same period a year ago. In fact, 1954 contributions already exceed the 1953 total of \$4,854.75, and we still have time to widen the gap.

It should be stated, however, that the 1954 total includes a \$2,000.00 contribution from The Medical Society of Virginia, authorized by the House of Delegates during the 1953 annual meeting.

The Committee sponsored a series of articles in the Virginia Medical Monthly which explained the importance of contributing to the Foundation, and pointed out how the medical schools in this country have been able to successfully resist encroachment by the federal government.

Committee members have also participated in programs of component medical societies in their areas. This enabled them to acquaint many Society members with the work of the Foundation.

A special letter bearing the signature of the President of The Medical Society of Virginia was sent to the membership along with a special contribution card. Response to the letter was most encouraging.

The Committee wishes to take this occasion to express its appreciation to the many physicians who are helping make 1954 a record breaking year in Virginia.

MARCELLUS A. JOHNSON, JR., M.D.,  
*Chairman*

HARRY C. BATES, JR., M.D.

L. H. BRACEY, M.D.

MALCOLM H. HARRIS, M.D.

F. D. MAPHIS, M.D.

JOHN R. MAPP, M.D.

WALTER McMANN, M.D.

RICHARD C. POTTER, M.D.

T. S. EDWARDS, M.D.

JAMES L. CHITWOOD, M.D.

LYDDANE MILLER, M.D.

JOHN H. DELLINGER, M.D.

CARRINGTON WILLIAMS, M.D.

### Maternal Health

The Committee on Maternal Health of The Medical Society of Virginia met at the Commonwealth Club, Richmond, July 14, 1954. Those present were: Dr. H.

Hudnall Ware, Jr., Chairman, Dr. Garrett Dalton, Dr. A. Tyree Finch, Dr. George S. Hart, Dr. Walter McMann, Dr. L. L. Shamburger, Dr. W. N. Thornton.

A report on the survey on maternal deaths for 1953 showed that 6 of the 88 cases were incomplete. This survey is now being conducted by personal visits through a representative of the Bureau of Maternal and Child Health of the State Health Department.

PERCENTAGE DELIVERIES BY PHYSICIANS AND BY MIDWIVES  
VIRGINIA: 1936 - 1953

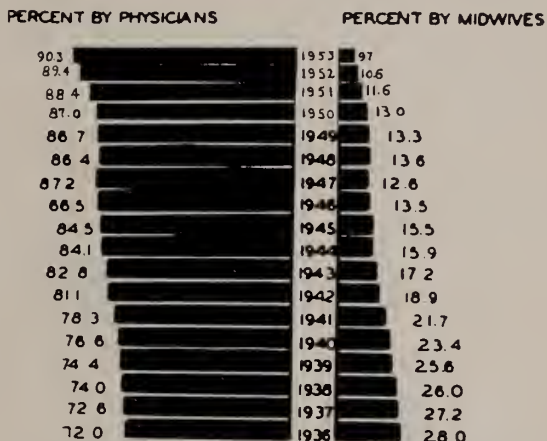


Chart No. 1 shows that there has been a gradual increase in the number of deliveries by physicians and a corresponding decrease in the number of deliveries by midwives.

TOTAL DELIVERIES AND DELIVERIES IN HOSPITALS  
VIRGINIA: 1936 - 1953

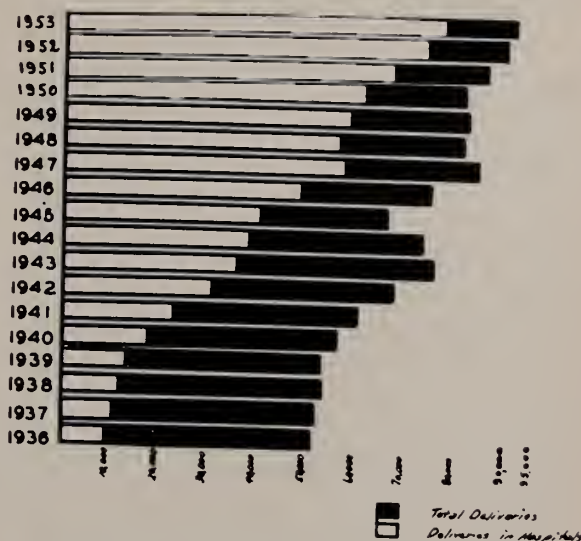


Chart No. 2 shows that there has been an increase in hospital deliveries as the total number of births increased. There were 91,831 births in the State during 1953 with 76,823 in hospitals.



### MATERNAL DEATH RATE VIRGINIA 1928-1953

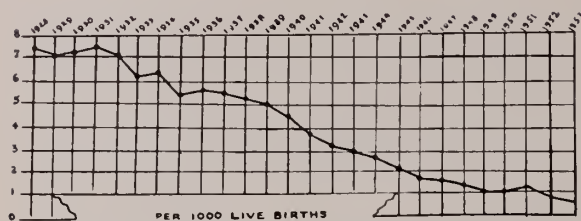


Chart No. 3 shows that the maternal death rate has decreased from 7.4 in 1928 to 0.7 in 1953. This rate compares with the national rate of 0.6

### MATERNAL MORTALITY AND HOSPITALIZATION OF BIRTHS VIRGINIA 1935-1953

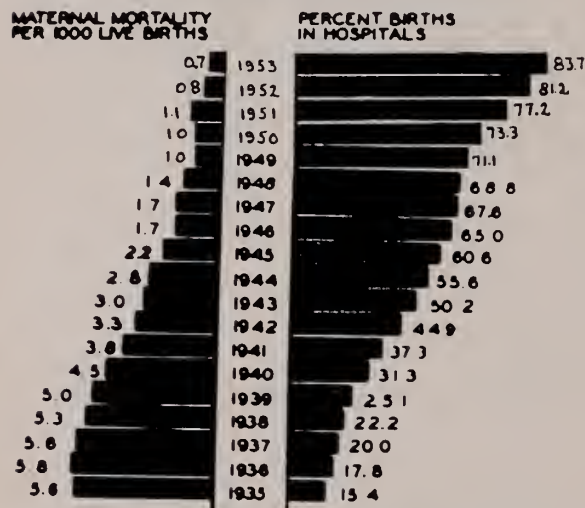


Chart No. 4 shows a decrease in maternal mortality as the hospital deliveries increased. The maternal mortality rate per 1,000 live births is determined by dividing the number of maternal deaths by the number of live births that occur during the year.

Charts were presented showing the number of deliveries by physicians, by midwives and in hospitals along with charts on maternal mortality rates.

A report of the MCH activities revealed that there are 195 clinics being operated by 246 local physicians attending approximately 10% of the prenatal patients in the State. There were 1261 obstetric and pediatric cases hospitalized under the MCH program involving an expenditure of \$186,601.48 during the period July 1st 1953-June 30th 1954.

Following a discussion of elective sterilization the Committee went on record as recommending that as many as 2 consultants render an opinion or that each hospital have a committee appointed for such consultation before sterilization was performed in any case.

### TREND OF MATERNAL MORTALITY IN VIRGINIA, BY COLOR, FOR THE YEARS 1942-1953

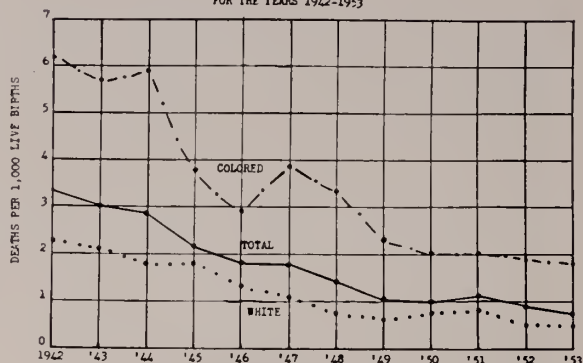


Chart No. 5 shows a decrease in both white and colored maternal mortality rates but the colored rate has always been higher.

It was further recommended that all terminations of pregnancy be reported to the Bureau of Vital Statistics in order that comparable statistics with other States be on an intelligible basis.

There has been an occasional request for discontinuing silver nitrate as a prophylactic in the eyes of the newborn or that the State Board of Health designate a substitute. In view of the fact that confusion may arise particularly among midwives the committee recommends continuing the use of silver nitrate.

GARRETT DALTON, M.D.

A. TYREE FINCH, M.D.

E. S. GROSECLOSE, M.D.

GEORGE S. HURT, M.D.

JOHN R. KIGHT, M.D.

W. L. McMANN, M.D.

EDWIN RUCKER, M.D.

L. L. SHAMBURGER, M.D.

W. N. THORNTON, M.D.

H. HUDNALL WARE, JR., M.D., *Chairman*

### To Confer with the Old Dominion Medical Society

The Committee met and considered the problem of admitting negro physicians to membership in The Medical Society of Virginia. The apparent obstacle was found to be the word "white" in the Constitution of the Society. Being informed that our Judicial Committee's report would cover the proposed deletion of this word from the Constitution of our Society, we advised the Chairman of the Liaison Committee of the Old Dominion Medical Society that we were sure this matter would be considered and some decision made by the House of Delegates of The Medical Society of Virginia during its Annual Meeting this year.

The Committee believed that nothing further could be done until after the Annual Meeting this fall, so no other meetings were held. The Committee moves the adoption of this report and its own dissolution.

JAMES L. HAMNER, M.D., *Chairman*

GUY W. HORSLEY, M.D.

WALTER P. ADAMS, M.D.  
 FRANK A. FARMER, M.D.  
 HARRY C. BATES, JR., M.D.

### Advisory Heart

This Committee had no matters referred to it during the year, and no meetings were held. Although a thorough study is being conducted to ascertain just how the Committee can best serve the membership, no formal report is offered at this time.

R. EARLE GLENDY, M.D., *Chairman*

### Poliomyelitis

The chairman met with members of the State Health Department and of the National Foundation for Infantile Paralysis the middle of December, 1953 to hear Dr. John Marchand, of the headquarters office of the N.F.I.P. present plans for the use of the Salk Poliomyelitis Vaccine. Following this meeting members of the committee were polled and they approved the use of the vaccine in Virginia.

The committee was invited to attend a meeting on March 17, 1954, held in the chambers of the Corporation Court, to discuss the procedures of administration of the Salk vaccine in the areas in Virginia that had been declared eligible to receive it. Dr. Kenneth Layne, regional medical consultant of the N.F.I.P. presented the plans. Medical Directors of the designated areas, members of the central office of the State Health Department, state representatives of the N.F.I.P., members of the State Department of Education, the Superintendent of the Parochial Schools of the Roman Catholic Diocese, and the chairman of this committee were present.

On April 6, 1954, the chairman attended a meeting with representatives of the State Health Department to discuss the use of gamma globulin for poliomyelitis during the current year as outlined by the Office of Defense mobilization. This year it is distributed for use in group inoculations and not for single family or single household contacts. The recommended dose has been increased to 10cc.

April 9, 1954. The Medical Director of the City of Alexandria notified the State Health Department that the Medical Society of Alexandria had taken action the previous evening on the question of their approval of the participation of Alexandria in the field trials of the Salk Poliomyelitis Vaccine and had voted to decline the offer.

April 15, 1954. The Arlington County Medical Society rescinded their previous action and voted not to participate in the administration of the Salk Vaccine. This action left seven areas in the state in which the vaccine would be used—Loudoun, Fairfax, Henrico, Chesterfield and Norfolk Counties, the City of Bristol and Washington and Smyth Counties, and the City of Richmond.

On April 25, 1954, the N.F.I.P. authorized the release of the Salk Poliomyelitis Vaccine and on the following morning, Monday, April 26, 1954, the first dose to be given in the world in field trials of the vaccine, was administered to a boy in McLean, Fairfax County.

On May 24, 1954, the chairman and Dr. Robert C.

Hood, of Arlington, represented the committee at a meeting to discuss what must be done throughout the polio season in the field trial areas in Virginia. Dr. Kenneth Layne, of the N.F.I.P. and Dr. Robert Korns, of the Poliomyelitis Vaccine Evaluation Center, Ann Arbor, Michigan, came to Richmond to attend this meeting and expressed their satisfaction at the completeness of the plans to follow through on children participating in the field trials.

August 19, 1954. The Office of Defense Mobilization notified the State Health Department that the use of gamma globulin for poliomyelitis has been extended to include the inoculation during the incubation period of all contacts of poliomyelitis not necessarily belonging to a larger group. It has been deemed advisable throughout to withhold gamma globulin for polio contacts in all field trial areas in order that the children who received the vaccine may have a normal exposure to the disease. The value of the vaccine as a protecting power is thereby more effectively determined.

As this report is submitted poliomyelitis cases are appearing. The report of incidence of cases this year to that of last year up to this time are 284 case to 484. The Norfolk area bearing the brunt of cases of poliomyelitis reported.

Since the unfortunate death of Dr. Albert McCown of this committee, Dr. Mason Romaine, the present state epidemiologist, has been serving on this committee in his capacity.

R. B. BOWLES, M.D.  
 E. A. HARPER, M.D.  
 ROBERT C. HOOD, M.D.  
 ROY M. HOOVER, M.D.  
 MASON ROMAINE, M.D.  
 LEE E. SUTTON, JR., M.D., *Chairman*

### Federal Medical Services

Your Committee has been quite active during the year acquainting physicians over the state with medicine's position on the VA Medical Care Program. Members of the Committee spoke at a number of medical meetings, and also addressed several other groups.

The stand of the AMA, with respect to the care of the sick and injured veteran, was particularly stressed. Although covered in more detail in the September 1954 issue of the Virginia Medical Monthly (page 456) AMA's recommendations to Congress are repeated for the sake of emphasis:

"It was the considered opinion of the AMA House of Delegates that the AMA has a responsibility for the health and welfare of the entire population and not for just a particular segment, and it, therefore, recommended that the Congress enact legislation limiting VA medical care and hospitalization benefits to:

- "(1) Veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated, and to
- "(2) Veterans with wartime service suffering from tuberculosis or psychiatric or neurological disorders of non-service connected origin, who are

unable to defray the expenses of necessary hospitalization, provided that treatment is given within limits of existing facilities, and only until local facilities for such treatment are adequate.

"The AMA believes that the responsibility for medical care of veterans, unable to pay, rests with the state and local governments along with other citizens in similar circumstances and that facilities for the care of all citizens can be made available when the communities and states reclaim their responsibility from the federal government."

Members of the Committee are always available to any society wishing to discuss the Veterans' Medical Care Program, and its various aspects.

CHARLES M. CARAVATI, M.D., *Chairman*

JOHN O. BOYD, JR., M.D.

W. L. NALLS, M.D.

E. C. DRASH, M.D.

THOMAS W. MURRELL, M.D.

ROBERT L. PAYNE, M.D.

DELEGATES TO 1954 MEETING  
THE MEDICAL SOCIETY OF VIRGINIA

Where no name is listed, it is indicative that no delegate or alternate was reported.

<i>Delegates</i>	<i>Alternates</i>
<b>Accomack</b>	
Dr. Joseph L. DeCormis	Dr. Belle DeCormis Fears
<b>Albemarle</b>	
Dr. McLemore Birdsong	Dr. B. S. Leavell
Dr. H. L. Archer	Dr. J. R. Morris
Dr. C. N. Moon, Jr.	Dr. G. S. Fitz-Hugh
Dr. E. C. Drash	Dr. A. P. Booker
Dr. T. S. Edwards	Dr. Woodbury Perkins
Dr. R. E. Herring	Dr. H. C. McCoy
<b>Alexandria</b>	
Dr. Ben C. Jones	Dr. John D. Hoyle
Dr. Charles V. Amole	Dr. John A. Sims
<b>Alleghany-Bath</b>	
Dr. Armistead Williams	Dr. H. G. Hudnall
Dr. M. B. Jarman	Dr. S. P. Hileman
<b>Amherst-Nelson</b>	
Dr. Lyddane Miller	
<b>Arlington</b>	
Dr. H. C. Bates	Dr. John T. Hazel
Dr. W. C. Welburn	Dr. Lloyd B. Burk
<b>Augusta</b>	
<b>Bedford</b>	
Dr. W. V. Rucker	Dr. T. H. Jennings
<b>Botetourt</b>	
<b>Buchanan-Dickenson</b>	
Dr. T. C. Moore	Dr. J. P. Williams
Dr. T. C. Sutherland	Dr. J. P. Sutherland
<b>Charlotte</b>	
Dr. Stuart Wilson Tuggle	Dr. J. D. Wilson
<b>Culpeper</b>	
Dr. O. K. Burnette	Dr. C. G. Finney

<i>Delegates</i>	<i>Alternates</i>
<b>Danville-Pittsylvania</b>	
Dr. John R. Eggleston	Dr. Samuel Newman
Dr. W. C. Fitzgerald	Dr. G. V. Thompson
<b>Fairfax</b>	
Dr. J. D. Zylman	
<b>Fauquier</b>	
Dr. John Ringler	Dr. Robert Latimer
<b>Floyd</b>	
<b>Fourth District</b>	
Dr. A. Tyree Finch	
Dr. John G. Graziani	Dr. Ray Moore, Sr.
Dr. James M. Habel, Sr.	Dr. James T. O'Neal
Dr. Earl M. Bane	Dr. William B. Bishop
Dr. Henry B. Showalter	Dr. Kester S. Freeman
Dr. L. H. Bracey	Dr. H. H. Braxton
<b>Fredericksburg</b>	
Dr. W. W. Butzner, Jr.	Dr. J. L. Smoot
Dr. H. D. Crow	Dr. T. B. Payne
<b>Halifax</b>	
Dr. N. M. Ewell	Dr. W. Lloyd Eastlack
<b>Hampton</b>	
<b>Hanover</b>	
Dr. John D. Hamner, Jr.	
<b>James River</b>	
Dr. J. H. Yeatman	Dr. A. C. Whitley
Dr. E. J. Haden	Dr. W. A. Pennington
<b>Lee</b>	
Dr. G. B. Setzler	Dr. T. S. Ely
<b>Loudoun</b>	
<b>Louisa</b>	
<b>Lynchburg</b>	
Dr. George B. Craddock	Dr. John R. Saunders
Dr. Harold L. Riley	Dr. A. D. F. White



<i>Delegates</i>	<i>Alternates</i>	<i>Delegates</i>	<i>Alternates</i>
<b>Mid-Tidewater</b>			
Dr. Joseph Chinn	Dr. J. M. Gouldin	Dr. John P. Lynch	Dr. J. Robert Massie, Jr.
Dr. Carl Broadus	Dr. R. D. Bates	Dr. Adney Sutphin	Dr. Elam C. Toone
Dr. A. W. Lewis, Jr.	Dr. M. H. Harris	Dr. E. L. Kendig, Jr.	Dr. Oscar Hite
Dr. J. R. Parker		Dr. H. St. George Tucker, Jr.	Dr. Edwin Vaughan
Dr. B. H. Bailey		Dr. Virgil R. May	
Dr. Raymond S. Brown	Dr. H. A. Tabb	Dr. William R. Morton	Dr. L. James Buis
Dr. A. L. Van Name	Dr. T. L. Grove	Dr. W. T. Thompson, Jr.	Dr. Robert V. Terrell
Dr. H. L. Shinn	Dr. R. D. Bowles	Dr. William Young	Dr. Elmer Robertson
<b>Norfolk</b>		<b>Roanoke Academy</b>	
Dr. William H. Whitmore	Dr. John Franklin	Dr. Horace Albertson	Dr. John Martin
Dr. Russell M. Cox	Dr. W. B. Hoover	Dr. Collins D. Nofsinger	Dr. M. A. Johnson, III
Dr. Mallory S. Andrews	Dr. Harry Cox	Dr. R. S. Hutcheson, Jr.	Dr. John Walke
Dr. John A. Cocke	Dr. M. Kirwan King	Dr. Conrad Stone	Dr. John Gardner
Dr. Kalford W. Howard	Dr. Mason C. Andrews	Dr. Allen Barker	Dr. Garrett Gooch
Dr. Forrest White		Dr. Wade H. Saunders	Dr. J. M. Bishop
<b>Northampton</b>		<b>Rockbridge</b>	
Dr. John R. Freeman	Dr. Edmund Henderson	Dr. O. H. McClung, Jr.	Dr. Thomas B. Hedrick
<b>Northern Neck</b>		<b>Rockingham</b>	
Dr. C. Harper Ward	Dr. Charles Griffith	Dr. Clifford T. Riddel, Jr.	Dr. C. S. Armentrout
Dr. Paul Pearson	Dr. Harold Sisson		
Dr. J. Motley Booker		<b>Russell</b>	
Dr. A. B. Gravatt, Jr.	Dr. Lee Liggan	<b>Scott</b>	
<b>Northern Virginia</b>		<b>Southwestern Virginia</b>	
Dr. Harold W. Miller	Dr. Frank Gearing, Jr.	Dr. R. D. Campbell	Dr. J. J. Eller
Dr. M. J. W. White	Dr. George Long	Dr. G. B. Kegley	Dr. Rufus Brittain
Dr. Dennis P. McCarty	Dr. Elizabeth Sherman	Dr. Glenn Cox	Dr. W. A. Porter
Dr. H. Pearce Maccubbin	Dr. George Murphy	Dr. E. L. Bagby	Dr. S. A. Tuck
Dr. John P. Snead	Dr. Chester Riley	Dr. Joseph Coates	Dr. W. V. Harrison
Dr. Frank Tappan	Dr. Thomas Iden	Dr. W. R. Chitwood	Dr. S. W. Huddle
<b>Orange</b>		Dr. W. F. Delp	Dr. C. G. Fox
Dr. J. G. Bruce, Jr.		Dr. R. L. Hillman	Dr. S. H. Catron
<b>Patrick-Henry</b>		Dr. A. F. Giesen	Dr. A. M. Showalter
Dr. W. N. Thompson		<b>Tazewell</b>	
Dr. H. M. Price	Dr. J. H. Irby	Dr. Mary Elizabeth Johnston	
<b>Princess Anne</b>		<b>Tri-County</b>	
Dr. Ira L. Hancock	Dr. Ralph Stata	Dr. E. F. Reese, III	Dr. G. G. Birdsong
<b>Richmond Academy</b>		Dr. W. H. Chapman	Dr. J. R. Ellison, Jr.
Dr. Benjamin W. Rawles, Jr.	Dr. P. D. Camp	Dr. F. I. Steele	Dr. Hugh Warren
Dr. Charles L. Outland	Dr. Russell G. McAllister	Dr. George J. Carroll	Dr. L. J. Stetson
Dr. W. Linwood Ball	Dr. Gilman Tyler	<b>Warwick-Newport News</b>	
Dr. R. D. Butterworth	Dr. William H. Hill	Dr. William A. Read	Dr. E. B. Mewborne
Dr. Wellford C. Reed	Dr. Carrington Williams, Jr.	Dr. Russell Buxton	Dr. Fred N. Thompson
Dr. William H. Higgins, Jr.	Dr. John D. Call	<b>Williamsburg-James City</b>	
		Dr. B. T. Painter	Dr. Joseph Barrett
		<b>Wise</b>	
		Dr. W. B. Barton	Dr. J. T. Phillips

## Presidents of The Medical Society of Virginia

PRESIDENT	YEAR OF MEETING	PRESIDENT	YEAR OF MEETING
*Dr. James McClurg, Richmond	1821	*Dr. R. S. Martin, Stuart	1902
*Dr. William Foushee, Richmond	1822	*Dr. J. N. Upshur, Richmond	1903
*Dr. William Foushee, Richmond	1823	*Dr. Joseph A. Gale, Roanoke	1904
*Dr. James Henderson, Richmond	1824	*Dr. Wm. S. Christian, Urbanna	1905
Meetings Discontinued.		*Dr. Lomax Gwathmey, Norfolk	1906
*Dr. Robert William Haxall, Richmond	1841	*Dr. Paul B. Barringer, Charlottesville	1907
*Dr. Robert William Haxall, Richmond	1842	*Dr. Wm. F. Drewry, Petersburg	1908
*Dr. Frederick Marx, Richmond	1843	*Dr. Stuart McGuire, Richmond	1909
*Dr. Thomas Nelson, Richmond	1844	*Dr. E. T. Brady, Abingdon	1910
*Dr. William A. Patteson, Richmond	1845	*Dr. O. C. Wright, Jarratt	1911
*Dr. William A. Patteson, Richmond	1846	*Dr. Hugh M. Taylor, Richmond	1912
*Dr. John A. Cunningham, Richmond	1847	*Dr. Southgate Leigh, Norfolk	1913
*Dr. William A. Patteson, Richmond	1848	*Dr. Stephen Harnsberger, Catlett	1914
	1849	*Dr. Samuel Lile, Lynchburg	1915
*Dr. Robert William Haxall, Richmond	1850	*Dr. Joseph A. White, Richmond	1916
*Dr. Beverley R. Wellford, Fredericksburg	1851	*Dr. Geo. A. Stover, South Boston	1917
*Dr. James Beale, Richmond	1852	*Dr. Ennion G. Williams, Richmond	1918†
*Dr. Thomas P. Atkinson, Danville	1853	*Dr. Ennion G. Williams, Richmond	1919
*Dr. Carter P. Johnson, Richmond	1854	*Dr. Paulus A. Irving, Farmville	1920
*Dr. H. C. Worsham, Dinwiddie	1855	*Dr. Alfred L. Gray, Richmond	1921
*Dr. H. C. Worsham, Dinwiddie	1856	*Dr. E. C. S. Taliaferro, Norfolk	1922
*Dr. James Bolton, Richmond	1857	*Dr. John Staige Davis, University	1923
*Dr. Levin S. Joynes, Richmond	1858	*Dr. W. W. Chaffin, Pulaski	1924
Meetings Discontinued		*Dr. Hunter H. McGuire, Winchester	1925
*Dr. R. S. Payne, Lynchburg	1870	Dr. W. L. Harris, Norfolk	1926
*Dr. R. S. Payne, Lynchburg	1871	*Dr. J. Shelton Horsley, Richmond	1927
*Dr. A. M. Fauntleroy, Staunton	1872	*Dr. J. W. Preston, Roanoke	1928
*Dr. Harvey Black, Blacksburg	1873	*Dr. J. Bolling Jones, Petersburg	1929
*Dr. A. G. Tebault, London Bridge	1874	*Dr. Charles R. Grandy, Norfolk	1930
*Dr. S. C. Gleaves, Wytheville	1875	*Dr. J. Allison Hodges, Richmond	1931
*Dr. F. D. Cunningham, Richmond	1876	*Dr. I. C. Harrison, Danville	1932
*Dr. J. L. Cabell, University	1877	*Dr. J. C. Flippin, University	1933
*Dr. J. H. Claiborne, Petersburg	1878	Dr. R. D. Bates, Newtown	1934
*Dr. L. S. Joynes, Richmond	1879	*Dr. F. H. Smith, Abingdon	1935
*Dr. Henry Latham, Lynchburg	1880	Dr. P. St. L. Moncure, Norfolk	1936
*Dr. Hunter McGuire, Richmond	1881	Dr. J. M. Hutcheson, Richmond	1937
*Dr. G. W. Semple, Hampton	1882	*Dr. G. F. Simpson, Purcellville	1938
*Dr. W. D. Cooper, Morrisville	1883	Dr. A. F. Robertson, Jr., Staunton	1939
*Dr. J. E. Chancellor, Charlottesville	1884	*Dr. H. H. Trout, Roanoke	1940
*Dr. S. K. Jackson, Norfolk	1885	Dr. W. B. Martin, Norfolk	1941
*Dr. Rawley W. Martin, Chatham	1886	*Dr. Roshier W. Miller, Richmond	1942
*Dr. Bedford Brown, Alexandria	1887	Dr. J. M. Emmett, Clifton Forge	1943
*Dr. Benjamin Blackford, Lynchburg	1888	*Dr. C. B. Bowyer, Stonega	1944
*Dr. E. W. Row, Orange C. H.	1889	Dr. H. B. Mulholland, Charlottesville	1945
*Dr. Oscar Wiley, Salem	1890	*Dr. Julian L. Rawls, Norfolk	1946
*Dr. W. W. Parker, Richmond	1891	Dr. W. L. Powell, Roanoke	1947
*Dr. H. Grey Latham, Lynchburg	1892	Dr. Guy R. Fisher, Staunton	1948
*Dr. Herbert M. Nash, Norfolk	1893	*Dr. M. Pierce Rucker, Richmond	1949
*Dr. Wm. P. McGuire, Winchester	1894	Dr. W. C. Caudill, Pearisburg	1950
*Dr. Robt. J. Preston, Abingdon	1895	Dr. C. Lydon Harrell, Norfolk	1951
*Dr. Wm. L. Robinson, Danville	1896	Dr. John T. T. Hundley, Lynchburg	1952
*Dr. Geo. Ben Johnston, Richmond	1897	Dr. James L. Hamner, Mannboro	1953
*Dr. Lewis E. Harvie, Danville	1898	Dr. V. W. Archer, Charlottesville	1954
*Dr. Jacob Michaux, Richmond	1899		
*Dr. Hugh T. Nelson, Charlottesville	1900		
*Dr. J. R. Gildersleeve, Tazewell	1901		

\*Deceased.

†Owing to influenza epidemic during World War I, the council met in 1918, and Dr. Williams was continued as President.

## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

*President*.....MRS. KALFORD W. HOWARD, Portsmouth  
*President-Elect*.....MRS. MAYNARD R. EMLAW, Richmond  
*First Vice-President*.....MRS. JAMES P. KING, Radford  
*Second Vice-President*.....MRS. M. H. HARRIS, West Point  
*Third Vice-President*.....MRS. SHEPPARD K. AMES, Cape Charles  
*Recording Secretary*.....MRS. LEE S. LIGGAN, Irvington  
*Corresponding Secretary*.....MRS. LEMUEL E. MAYO, Portsmouth  
*Treasurer*.....MRS. WILLIAM C. BARR, Richmond  
*Parliamentarian*.....MRS. M. C. GLOVER, Arlington  
*Historian*.....MRS. C. M. MCCOY, Norfolk

The Thirty-second annual meeting of the Woman's Auxiliary to The Medical Society of Virginia, meeting with the First Interstate Scientific Assembly, will be held at the Shoreham Hotel, Washington, D. C., on Tuesday, November 2nd, at 9:15 A. M.

A most cordial invitation is extended to all women who are Auxiliary members or guests of physicians attending the Scientific Assembly to participate in all social functions and to attend the General Annual Meeting. All wives of doctors will be welcomed.

### HEADQUARTERS — SHOREHAM HOTEL

Registration, Lower Main Lobby, Shoreham Hotel

Sunday, October 31st, 3:00 - 7:00 P. M.

Monday, November 1st, 10:00 A. M. - 4:00 P. M.

Tuesday, November 2nd, 9:00 - 10:30 A. M.

Each lady is urged to register promptly on arrival.

The District of Columbia Women's Medical Society have offered their suite for the use of the Auxiliary ladies during the Convention, except after 3 P. M. on Monday.

### COMMITTEES

#### *Arrangements—Chairmen*

MRS. LAWRENCE A. RAPEE, Washington

MRS. EUGENE GREYER, Alexandria

MRS. LEE B. MARTIN, Arlington

#### *Co-Chairmen*

MRS. CHRISTOPHER J. MURPHY, JR., Alexandria

MRS. ANTHONY DiSARIO, Arlington

#### *Corresponding Secretary*

MRS. RICHARD PALMER, Alexandria

MRS. HERMAN DIAMANT, Arlington

#### *Convention Treasurer*

MRS. FORREST M. SWISHER, Arlington

#### *Publicity*

MRS. HERBERT SCHOENFIELD, Washington

MRS. JAMES MOSS, Alexandria

MRS. ROBERT MITCHELL, Arlington

#### *Luncheon*

MRS. HOWARD DONALD, Washington

MRS. WILLIAM WEAVER, Alexandria

MRS. K. CHARLES LATVEN, Arlington

#### *Fashion Show*

MRS. CHARLES TEGGE, Washington

MRS. JOHN HOYLE, Alexandria

MRS. A. J. ORLOSKY, Arlington

#### *Hospitality*

MRS. J. R. B. HUTCHINSON, Arlington

MRS. CHRISTOPHER J. MURPHY, JR., Alexandria

#### *Pages*

MRS. CLARK BATES, Arlington

MRS. FRANK RIPBERGER, Alexandria

#### *Transportation*

MRS. M. W. GLOVER, Arlington

#### *Credentials and Registration*

MRS. ROBERT DETWILER, Arlington

#### *Timekeeper*

MRS. CLYDE W. VICK, JR., Petersburg

#### *Chairman of Tellers*

MRS. C. C. HATFIELD, Saltville

### PROGRAM

#### Monday, November 1st

10:00-11:00 A.M.—The Mead Johnson Coffee Hour, Lower Main Lobby, Shoreham Hotel, the Woman's Auxiliary to the Medical Society of the District of Columbia, Hostesses

Mrs. Edgar Quayle, Chairman

2:00 P.M.—Pre-Convention Board Meeting, Suite 100C, Shoreham Hotel

Presidents and Presidents-Elect of Component Auxiliaries, State Officers and Chairman of Standing and Special Committees are expected to attend.

#### Tuesday, November 2nd

9:15 A.M.—General Annual Meeting, Louis Seize Room, Shoreham Hotel.

Mrs. Kalford W. Howard, President, presiding.

Invocation—Mrs. Hawes Campbell, Convention Chaplain

Address of Welcome—Mrs. Richard H. Todd, Immediate Past-President, Woman's Auxiliary to the Medical Society of the District of Columbia

Response—Mrs. James P. King, First Vice-President

In Memoriam—Mrs. Hawes Campbell

Minutes

Roll Call

Presentation of Honored Guests

President's Report

Report of Officers

Reports of Chairmen of Standing and Special Committees

Report of Councilor to Southern

Reports of County Auxiliary Presidents

Award of Membership Prizes—Mrs. Maynard R. Emlaw

Report of Credentials Committee—Mrs. Robert Detwiler

Report of Annual Convention of the Woman's Auxiliary



ary to A. M. A.—Mrs. Richard M. Reynolds, National Public Relations Chairman  
 Address—Mrs. George D. Feldner, President, Woman's Auxiliary to the Southern Medical Association  
 Address—Mrs. George Turner, President, Woman's Auxiliary to the American Medical Association  
 Unfinished Business  
 New Business  
 Recommendations from the Board  
 Report of Committee on Revisions—Mrs. Paul Pearson  
 Report of Resolutions Committee—Mrs. Frederick L. Finch  
 Report of Nominating Committee—Mrs. Thomas N. Hunnicutt, Jr.  
 Election of Officers  
 Installation of Officers—Mrs. George Turner, President, Woman's Auxiliary to the American Medical Association  
 Adjournment

#### LUNCHEON

1:15 P.M.—First Interstate Assembly Women's Auxiliary Luncheon, Continental Room, Sheraton Park Hotel  
 Presided over by Mrs. Duane Richmeyer, President, Woman's Auxiliary to the Medical Society of the District of Columbia, and Mrs. Kalford W. Howard, President, Woman's Auxiliary to The Medical Society of Virginia  
 Invocation—Mrs. Hawes Campbell, Convention Chaplain  
 Presentation of Honored Guests  
 Greetings from Mrs. George D. Feldner and Mrs. George Turner  
 Presentation of Virginia Gavel and President's Pin Acceptance  
 Presentation of Past-President's Pin—Mrs. Thomas N. Hunnicutt, Jr.  
 Luncheon  
 Fashion Show  
 Adjournment

#### Wednesday, November 3rd

8:30 A.M.—Past President's Breakfast, Suite 100B, Shoreham Hotel, Mrs. Thomas N. Hunnicutt, Jr., Chairman  
 9:30 A.M.—Post-Convention Board Meeting, Suite 100C, Shoreham Hotel, Mrs. Maynard R. Enlaw presiding  
 Presidents and Presidents-Elect of Component Auxiliaries, State Officers and Chairmen of Standing and Special Committees are expected to attend.

The Alexandria and Arlington Auxiliaries cordially invite and welcome the members and guests of the Woman's Auxiliary to The Medical Society of Virginia to the 32nd Annual Meeting and the

First Interstate Scientific Assembly. This is to be held in conjunction with the Woman's Auxiliary to the Medical Society of the District of Columbia at the Shoreham Hotel in Washington, D. C., on October 31st, November 1st, 2nd and 3rd.

MRS. EUGENE R. GREYER, *Alexandria Chairman of Arrangements*

MRS. LEE B. MARTIN, *Arlington Chairman of Arrangements*

MRS. CHRISTOPHER J. MURPHY, JR., *Alexandria Co-Chairman*

MRS. ANTHONY DiSARIO, *Arlington Co-Chairman*

#### Southern Medical Association.

This is a cordial invitation to Virginia auxiliary members to attend the Thirtieth Annual Meeting of the Woman's Auxiliary to the Southern Medical Association in St. Louis, Missouri, November 8-10, 1954. Many novel and interesting features of entertainment have been planned for us by Mrs. Edmund S. Beckett, General Chairman, and her able committee. Among the events are the following:

Monday, November 8—*Tea*, at 3:00 p.m. in Japanese Tea Garden, Missouri Room, Hotel Statler

Tuesday, November 9—*General session*—9:30 a.m.—16th Floor, Hotel Statler, Mrs. George D. Feldner, President, presiding.

*Annual Doctor's Day Luncheon*—1:00 p.m., Ballroom, Hotel Statler. This is especially to honor our doctors and all members are urged to bring their husbands. There will be no guest speaker but awards for Doctor's Day contest will be made.

Wednesday, November 10—*Closing session*—10:00 a.m., 16th Floor, Statler, Mrs. Feldner, President, presiding. Our National President, Mrs. George Turner, will be guest speaker.

*Annual Dinner Dance*—7:00 p.m., Gold Room, Jefferson Hotel.

A warm welcome awaits you in St. Louis and I hope to see many of our Virginia members there.

LUCIA K. EMLAW (Mrs. Maynard R.)

*Third Vice-President, Woman's*

*Auxiliary to Southern Medical Association*

## EDITORIAL

---

### The Challenge of the Ever Increasing Need for Nursing Care

**H**OSPITALS are confronted with the problem of increase in numbers of patients; increase in the demands for technical service for the patients; and with the problem of obtaining and retaining an adequate supply of nursing personnel.

The nursing profession is aware of these problems as is the American Medical Association and the American Hospital Association. Perhaps one of the best things that has come out of the problem of meeting the increase in nursing needs of our country has been the cooperative spirit that has grown up in all groups of health workers. The American Medical Association, the American Hospital Association, the American Nurses' Association, and the National League for Nursing are working together to try to increase the supply of nurses and to make sure that professional nurses are given the opportunity to utilize their nursing skill. Examples of such efforts can be seen in the various nursing school recruitment programs; in studies, institutes, and workshops that are being made for better utilization of the "on the job trained worker" as well as for the better utilization of the professional nurse; also on the increasing emphasis being placed in the nursing students curriculum on the problem of meeting the emotional, physical and spiritual needs of the patient through cooperating with other workers.

A few years ago when one nurse was expected to give complete care to a few patients it was a relatively easy matter for the nurse to learn her patients and to recognize their moods. When the patient remained in the hospital over a prolonged period of time the nurse had time to become acquainted with the patient. Today this problem is much greater for the nurse because our patients' hospital stay is shorter; also because there are increased technical demands on the nurse. Many technical devices are used today which were unknown a few years ago, or if known were rarely used or were performed by the doctor. These technical duties absorb the nurses time and attention and give her less time to spend talking to her patient. The increased number of patients to be cared for by the nurse necessitates help from other sources if the patient is to be bathed, fed, and have the bodily needs met. Hospitals have therefore brought in the lay person to assist in this job. These persons with on the job training have been of tremendous help in meeting the nurse shortage but in many instances they are not equipped to recognize and meet the patients emotional needs. For example, the pre-operative patient is usually frightened. It is not enough to say, "You are going to be all right". The patient needs some explanations as to the type of operation or treatment and what to expect. The surgeon or physician usually gives this to the patient but the patient will think it through and will want a further explanation after the doctor has left.

The understanding nurse gives the patient a chance to talk of his fears and she tries to make him see that his apprehension is not unusual. She explains that the patient will receive medicine the day of the operation to make him relax and that when he returns from the operating room he will awaken in the oxygen tent which will aid in supplying oxygen to the body and thus decrease the strain on the vital organs. This need for explanation is equally important for medical patients and for all stages of the patients treatment, convalescence, and discharge.

If the nurse is to inspire the patient's confidence in the physician, the hospital, and the nurses and if she is going to meet his emotional needs she must have a full knowledge of the doctor's plan of treatment and reactions to be expected. She must

have a warm understanding personality and a knowledge of the patient's psychological needs. As important as the physical needs of any patient are the psychological needs. The pills and hypodermics may be given on time and treatments and dressings applied with a skilled hand, but if the patient feels frightened, frustrated and alone, the recovery is retarded and we are not meeting patients needs. Skill in meeting patients emotional needs is developed through study of the social sciences and a concentrated effort on the part of the nurse. More emphasis in the School of Nursing curriculum is being placed on the social sciences but we need to continue to strengthen this aspect.

Occasionally we hear criticism that the young nurses of today do not have the interest of the patient at heart as nurses used to do; they only want to get off duty on time. We know this cannot be true when we see young nurses giving of their time, effort, and even of their limited money to help some patient in distress. Numerous examples can be cited but I will only name a few.

An out-of-state patient with very little money and no relatives near by to visit her was in the hospital for months. A young student nurse on that ward, knowing the patient was alone and with limited funds, began taking the patient's gowns home to wash and iron them in her time off duty. Not only did she do this during the period she was assigned to this ward but even after she was moved to another assignment she continued to come back and do this patient's laundry. While this act was of material help to the patient, the knowledge that someone cared enough to perform this act of love meant more to the patient than words can tell.

A ten year old orphan was admitted to the hospital for some surgery. She had 73 cents in her pocketbook which she confided to the nurse that she was saving to buy herself a suit. She stated she had always wanted a suit and while she knew she would not be able to save enough money to get herself one this Easter, she would some day have that suit. The nurses decided that she should have that suit now. One nurse who could sew cut down a suit that she had outgrown and made it to fit this patient; one bought her a blouse; one shoes; one a hat and the other a pocketbook. The little girl was discharged a couple of days before Easter and she left in her new outfit and with the happiness that only a ten year old who is realizing a cherished dream can experience.

We can find daily examples of our students and young nurses staying overtime to write letters, to take patients to church or downtown or making little gifts to patients who are old or alone. So long as we see such examples of generosity and unselfishness we need have no fear that the spirit of nursing is being lost. We need provide assistance in its development through our educational programs in our schools and through healthy relationships in our practice fields or hospitals.

With the tremendous increase in demand for nursing care that has appeared during the past twenty years we cannot possibly hope to provide the same number of professional nurse hours per hospital patient as was commonly expected in the thirties. If we did so there would be few, if any, women entering other professions and few left to marry to become homemakers and mothers. Our only hope is to continue to attract as many as possible who have the necessary qualifications to enter professional nurse schools. In addition to the problem of recruiting or attracting prospective nursing students, there is the problem of financing the education of those who have qualifications but not the money. Much has been done in recent years to provide financial assistance, not only by the state but by philanthropic individuals and groups of individuals. There is, however, still need for more assistance of this kind.

We need to make our nursing schools truly educational so that each graduate is prepared to meet the total patient needs, to direct the activities of those working with



her, and to live in such a way that she derives professional and personal happiness and satisfaction in her work which will make her wish to continue in it. We need to attract those persons with suitable personalities and qualifications for nursing who either do not have the required academic background for professional nursing or who do not wish to take the necessary time for the professional nurse program to enter practical nurse schools. We need to continue to seek ways and means of improving these practical nurse schools so that the students receive the best possible preparation. We need to continue to select and employ lay workers to assist in patient care and these workers need thorough and careful on the job training. After bringing all of these groups together we need a continual in-service education program for our hospitals, not only for our nursing personnel but for all groups of workers. Unless there is job satisfaction we cannot expect to retain our workers, whether nurses or other personnel, and job satisfaction goes further than just salary. Perhaps the most important element in job satisfaction is good inter-personal relations where each individual feels she is making a worthwhile contribution which is duly appreciated.

ROY C. BEAZLEY, R.N.

EDITOR'S NOTE: Miss Beazley is Acting Co-Chairman, Department of Nursing, University of Virginia and Director, Nursing Service, University of Virginia Hospital.

---

## NEWS

---

### Calendar of Coming Events

EVENING MEDICAL LECTURES—University of Virginia, School of Anatomy, Charlottesville, October 25. Dr. John C. Cutler, Washington, D. C., "Experimental Human Inoculation with Syphilis"

NATIONAL GASTROENTEROLOGICAL ASSOCIATION—Shoreham Hotel, Washington, D. C., October 25-27

FIFTH NATIONAL COUNTY MEDICAL SOCIETIES CIVIL DEFENSE CONFERENCE—Bismarck Hotel, Chicago, October 30-31

THE MEDICAL SOCIETY OF VIRGINIA—(Annual Meeting)—First Interstate Scientific Assembly—Shoreham Hotel, Washington, D. C., October 31-November 3

EVENING MEDICAL LECTURES—University of Virginia, School of Anatomy, Charlottesville, November 8. Dr. Lawrence E. Young, Rochester, N. Y., "Some Newer Concepts of Hemolytic Disorders"

SOUTHERN MEDICAL ASSOCIATION—St. Louis, Missouri, November 8-11

AMERICAN COLLEGE OF SURGEONS—Clinical Congress—Atlantic City, N. J., November 15-19

AMERICAN MEDICAL ASSOCIATION—Clinical Meeting—Miami, Florida, November 29-December 2

SECOND ANNUAL CONFERENCE ON THERAPY—University of Virginia Medical School, December 10, 9:00 A.M.-5:00 P. M.

### Southern Medical Association.

Arrangements for the forty-eighth annual meeting of this Association in St. Louis, November 8-11, are about complete. The meeting begins with a general

public session on the 8th, and between that time and Thursday noon, the 11th, forty-eight half-day sessions will be held.

Dr. Alphonse McMahon, St. Louis, is president

of the Association, and Dr. Daniel L. Sexton is serving as general chairman of the Committee on Arrangements.

Requests for room reservations for the meeting should be sent to the Housing Bureau, Southern Medical Association, 911 Locust Street, Room 406, St. Louis 1, Missouri.

#### **Absentee Voting.**

Another election year is with us and unfortunately the First Interstate Scientific Assembly (Annual Meeting) conflicts with election day—November 2. However, there is no need for a physician to miss the meeting in order to cast his vote. It is a simple matter to vote by absentee ballot, and the procedure to be followed is outlined for your convenience.

- (1) Secure an absentee ballot application from the State Board of Elections, Capitol Building, Richmond.
- (2) Complete the application in the presence of a witness, and
- (3) Send it, with 33¢ to your local precinct registrar. If you are a qualified voter, a ballot will be sent you by registered mail.
- (4) After voting, return the ballot by registered mail.

Should you reside in Richmond, the procedure is very simple. Merely go to the Registrar's Office, City Hall Basement, where you can fill out a form and vote before a notary. This takes a very few minutes, and can be done any time after September 20. It is quite likely that this same procedure can be followed by residents of the larger cities.

Be sure that ballot applications reach your registrar before October 25!

#### **Dr. Eckles Named Health Director.**

Dr. Beverley F. Eckles, Galax, has been named as health director for Henrico County, succeeding the late Dr. Blesse. He began his duties on October 1st. Dr. Eckles is a native of Richmond and practiced there for fifteen years when he moved to Galax in 1928.

#### **Governor for American Diabetes Association.**

Dr. William R. Jordan, Richmond, has been appointed Governor for the Commonwealth of Virginia for the American Diabetes Association.

#### **Dr. Mettauer Again Honored.**

The recently completed addition to the Southside Community Hospital, Farmville, has been named the

Mettauer Ward in honor of Dr. John Peter Mettauer, noted physician, surgeon and patriot. The dedication ceremonies took place on August 29th, and Dr. Wyndham B. Blanton, Richmond and Cumberland, spoke on Dr. Mettauer. A portrait was presented to be hung in the public area of the new wing.

#### **Dr. Ernest R. Trice,**

Captain, M.C., U. S. Army, on duty at Osaka Army Hospital, was awarded the Bronze Star on August 16th.

#### **Dr. L. O. Fears, Jr.,**

Former director of the Carroll-Grayson Health District, was transferred to the Page-Warren-Shenandoah Health District on August 16, 1954.

#### **The Gill Memorial Eye, Ear and Throat Hospital**

Will hold its 28th Annual Spring Congress in Ophthalmology and Otolaryngology in Roanoke, April 4-9, 1955.

Among the guest speakers who will attend are: Drs. Henry L. Birge, Hartford, Conn.; Paul Boeder, Southbridge, Mass.; William B. Clark, New Orleans; Dan M. Gordon, New York; Anderson C. Hilding, Duluth, Minn.; Chevalier L. Jackson, Philadelphia; Bertha S. Klein, Chicago; T. G. Martens, Rochester, Minn.; Daniel S. Miller, Boston; Major General Daniel Ogle, Washington; Thomas Paine, Ann Arbor; R. Townley Paton, New York; James Purnell, New York; Albert D. Ruedeman, Detroit; Robert E. Ryan, St. Louis; Richard Schneider, Ann Arbor; John Sheldon, Ann Arbor; and Grant Ward, Baltimore.

#### **Dr. Thomas S. Edwards**

Announces his association with Dr. Harvey D. Smallwood for the practice of internal medicine. Their offices are at 1021 West Main Street, Charlottesville.

#### **Dr. A. M. Tiernan,**

Recently of Jewell Ridge, is now at the Louisville General Hospital, Louisville, Kentucky, where he is taking a residency in ophthalmology.

#### **Van Meter Prize Award.**

The American Goiter Association again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held

in Oklahoma City, Oklahoma, April 28, 29 and 30, 1955, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English, and a typewritten double space copy in duplicate sent to the Secretary, John C. McClintock, M.D., 149½ Washington Avenue, Albany, New York, not later than January 15, 1955.

#### **Dr. Samuel H. Carter**

Has been released from active military duty and has opened his office in Verona for the general practice of medicine.

#### **Dr. Maury C. Newton, Jr.,**

Is now associated in practice with his father at Narrows. He is a graduate of the Medical College of Virginia and for the past year has been on the House Staff there as a recipient of the Mead Johnson General Practice Award.

#### **Dr. L. E. Dunman,**

Pearisburg, has been named to the school trustee electoral board of Giles County.

#### **Dr. Samuel Richman,**

Chief of Radiological Service at McGuire Veterans Hospital, Richmond, for the past eight years, has resigned to assume private practice in radiology in Greensboro, North Carolina.

### **Heredity Theory of Epilepsy.**

Epilepsy may be associated less with heredity than with complications before, during and just after birth, two Baltimore physicians reported in the June 19th Journal of the American Medical Association. A study of 396 epileptics and 393 non-epileptic children "raises doubts" as to the family-pattern theory of epilepsy. "The results of this study appear to indicate that there exists a relationship between certain abnormal conditions associated with childbearing and the subsequent development of epilepsy in the offspring."

Records of more than 500 epileptic children born in Baltimore between 1935 and 1952 showed "significantly more complications of pregnancy and delivery, prematurity and abnormal neonatal conditions" than a similar number of matched control births. "These abnormalities were just as frequent among epileptic children whose parents did or did

#### **For Sale.**

Complete office equipment, including fluoroscope, two sterilizers, metabolism machine, etc., in excellent condition. Owned by general practitioner, recently deceased. Contact Mrs. J. Edward Amiss, Altavista, Virginia. (*Adv.*)

#### **For Sale.**

X-Ray view box, practically new; cassettes all sizes and wire film hangers, all in good condition. Also portable x-ray machine, General Electric, for electric current 25 cycle—250 volt. Contact Dr. T. W. Hankins, Swoope, Virginia. (*Adv.*)

#### **Location Wanted.**

General Practitioner, qualified in surgery, age 31, to be released from Army February 1955, desires to associate with another physician or with small group in Virginia town of 5,000-20,000. For details, write Box 200, % Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia. (*Adv.*)

#### **For Rent.**

Excellent opportunity for physician just outside Washington in expanding community of Alexandria. Complete 5-room house available for use as office in area needing services of a physician. Owners willing to assist doctor in getting started. Telephone Mr. Charles Gerstain, Temple 6-9378, Washington, D. C., for appointment. (*Adv.*)

not have epilepsy." The pattern of epilepsy in relation to mishaps in pregnancy or birth is similar to that already reported in cerebral palsy. This indicates that epilepsy should be added to the list of "reproductive casualties" that includes stillbirth, death of the newborn, and palsy.

The physician suggested one of the reasons for the theory of family transmission of epilepsy is that premature births tend to run in families and that a large number of the epileptic births are premature. They said their findings should be considered in attempts to improve conditions of maternal health and for the study of certain neuropsychiatric disorders.

The study, aided by grants from the Foundation for Mentally Retarded and Handicapped Children and the Civitan Club of Baltimore, was made by Drs. Abraham M. Lilienfeld and Benjamin Pasamanick, of the Johns Hopkins School of Hygiene and Public Health.



## OBITUARIES

---

**Dr. John Powell Williams,**

Widely known Richmond physician, died September 1st, at the age of fifty-nine. He was chief of medical services at McGuire Veterans Administration Hospital. Dr. Williams received his medical degree from the University of Virginia in 1923. During World War II, he served as chief of medical service and unit director of the Forty-Fifth General Hospital in North Africa and Italy. He held the rank of Colonel in the medical corps and was awarded the Legion of Merit. Dr. Williams was professor of clinical medicine at the Medical College of Virginia. He was a member of the State Medical Advisory Committee for Civil Defense and was chairman of the Richmond Academy of Medicine Advisory Committee to Selective Service. Dr. Williams was a member of many medical organizations, having served as president of the Constantinian Society and the Virginia Section of the American College of Physicians. He had been an active member of The Medical Society of Virginia since 1925, at one time serving as chairman of the committee for National Emergency Medical Service. His wife and two children survive him.

**Dr. John Lloyd Tabb, Jr.,**

Prominent radiologist of Richmond, died September 1st after a brief illness. He was a native of Gloucester County and sixty-one years of age. Dr. Tabb graduated from the Medical College of Virginia in 1916, following which he served in France during World War I. He was chief radiologist at St. Luke's Hospital where he had been a member of the staff since 1924. Dr. Tabb was also roentgenologist at the Crippled Children's Hospital and associate professor of radiology at the Medical College of Virginia. He was a member of many professional organizations and a past president of the Radiological Society of Virginia. Dr. Tabb had been an active member of The Medical Society of Virginia since 1917. His wife and two sons survive him.

**Dr. Lemuel Leslie Eley,**

Well known physician of Chuckatuck died August 20th, having been in failing health for about a year. He was eighty-three years of age and a graduate in medicine from the University of Maryland in 1891. Dr. Eley had practiced in Nansemond County for the past sixty-three years and had continued his practice until the week he died. He was prominent in civic affairs and served as a member of the Nansemond County School Board for a number of years. Dr. Eley was a Life Member of The Medical Society of Virginia, having joined in 1905. His wife and three children survive him.

**Dr. Heber Jones Morton,**

Stuarts Draft, died in a New York hospital on August 10th after a long illness. He was seventy years of age and received his medical degree from the University of Georgia in 1909. Dr. Morton had practiced in Augusta County for twenty-two years. He was a surgeon for the N. & W. Railway. Dr. Morton took an active part in American Legion activities, having served in the Medical Corps during World War I. He was a Royal Arch Mason, a past president of the Augusta County Medical Society and had been a member of The Medical Society of Virginia for twenty-three years. His wife and two sisters survive him.

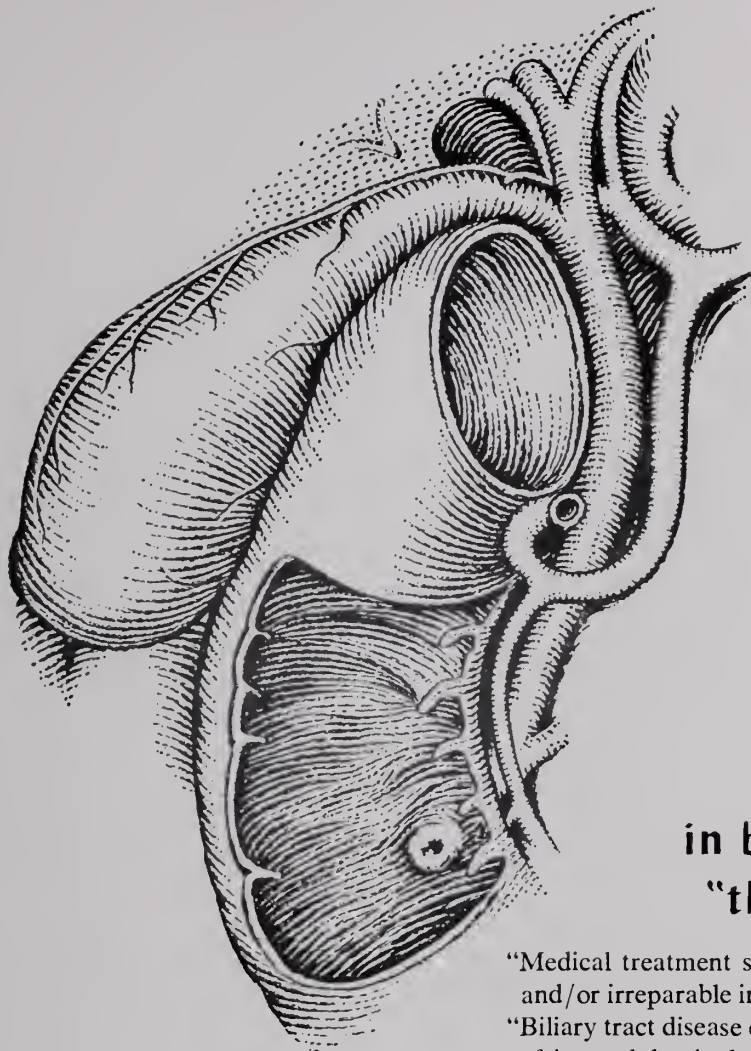
**Dr. J. Thomson Booth,**

Ashland, died August 26th, at the age of sixty-nine. He was formerly a member of The Medical Society of Virginia. His wife and two daughters survive him.

**Dr. William Sampson Hadley,**

Norfolk, died July 30th at the age of fifty-six. He graduated from Jefferson Medical College in 1921. Dr. Hadley was formerly a member of The Medical Society of Virginia. His wife and a son survive him.

---



## in biliary stasis... "therapeutic bile"

"Medical treatment should be tried before stones and/or irreparable inflammation have occurred."<sup>1</sup>

"Biliary tract disease comprises an important cause of intra-abdominal syndromes. . . . Medical management is the accepted treatment for functional disorders."<sup>2</sup>

## Decholin<sup>®</sup> and Decholin Sodium<sup>®</sup>

(dehydrocholic acid, *Ames*)

(sodium dehydrocholate, *Ames*)

"... increase the volume output of a bile of relatively high water content and low viscosity."<sup>3</sup>

*Decholin* Tablets, 3¾ gr. (0.25 Gm.), bottles of 100, 500, 1000 and 5000. *Decholin Sodium*, 20% aqueous solution, ampuls of 3 cc., 5 cc. and 10 cc.; boxes of 3, 20 and 100.

1. Segal, H.: *Postgrad. Med.* 13:81, 1953. 2. O'Brien, G. F., and Schweitzer, I. L.: *M. Clin. North America* 37:155, 1953. 3. Beckman, H.: *Pharmacology in Clinical Practice*, Philadelphia, W. B. Saunders Company, 1952, p. 361.

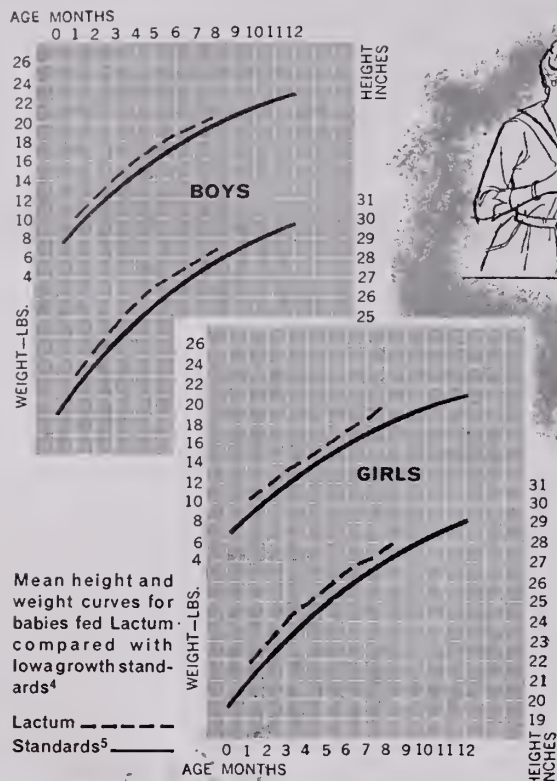
**AMES COMPANY, INC.**

Elkhart, Indiana

Ames Company of Canada, Ltd., Toronto



53754



## AMPLE PROTEIN FOR OPTIMAL GROWTH

### Essential to the NEW BASIC CONCEPT in infant feeding

Accumulating clinical studies are convincing evidence of the infant's need for generous amounts of protein for optimal tissue and motor development.<sup>1,2</sup>

Lactum supplies 16% of its calories as protein, providing an ample margin of safety over the Recommended Daily Allowance for infants. A typical 24-hour Lactum feeding for a 10-pound infant provides 20 Gm. of protein—25% more than the National Research Council's Recommended Daily Allowance.\* Babies fed Lactum® consistently show outstanding height-weight ratios (see charts).

The generous amounts of *natural milk protein* in Lactum contribute to an excellent level of satiety. Infants tend to have better dispositions and sleep well. Night feedings usually can be discontinued earlier.

As an added safety factor, Lactum contains sufficient added carbohydrate (Dextri-Maltose®) to spare protein and permit efficient fat metabolism.<sup>1,3</sup>

The natural nutrients of the whole milk in Lactum are not manipulated in any manner. Nothing is substituted. All vitamins and minerals are retained in optimal amounts. And Lactum formulas supply *twice* as much vitamin B<sub>6</sub> as breast milk.

Lactum feedings are easy to prepare. One part of Liquid Lactum to 1 part of water, or 1 level measure of Powdered Lactum to 2 ounces of water, makes a formula supplying 20 calories per fluid ounce.

(1) Jeans, P. C.: In A.M.A. Handbook of Nutrition, Ed. 2, Philadelphia, Blakiston, 1951, p. 275. (2) Albanese, A. A.: *Pediat.* 8: 455, 1951. (3) Holt, L. E., Jr., and McIntosh, R.: In *Holt Pediatrics*, Ed. 12, New York, Appleton-Century-Crofts, Inc., 1953, pp. 175-178. (4) Frost, I. H., and Jackson, R. L.: *J. Pediat.* 39: 585, 1951. (5) Jackson, R. L., and Kelly, H. G.: *J. Pediat.* 27: 215, 1945.

\*Calculated on the basis of a daily allowance of 3.5 Gm. per Kg.



MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

**MEAD**



# VIRGINIA

## MEDICAL MONTHLY

### *Contents*

- The Relation of Neurosurgery to General Practice, William T. Spence, M.D. . . . 519
- Bronchial Asthma, J. Warrick Thomas, M.D. . . . 524
- Practical Advice About Handedness, Eugene M. Caffey, Jr., M.D.  
and W. E. Harris, PhD. . . . 530
- Brain Abscess Associated with Congenital Heart Disease, J. M. Meredith, M.D. . . . 534
- CAT-SCRATCH DISEASE, Thomas N. Hunnicutt, Jr., M.D., F.A.C.P.,  
and Cecil F. Evans, Jr., M.D. . . . 538
- Rehabilitation of The Diabetic Patient, William R. Jordan, M.D. . . . 541
- Facilitating Medical Service, John G. Graziani, M.D. . . . 543
- Mesenteric Cysts, E.M. Chitwood, Jr., M.D., George W. Kelly, Jr., M.D.,  
and W. W. Walton, M.D. . . . 546
- Clinicopathological Conferences, Gordon Hennigar, M.D., Wm. R. Kay, M.D. . . . 547

(Continued on page 6)

consider  
**ILOTYCIN**  
(ERYTHROMYCIN, LILLY)  
FIRST

...because  
'Ilotycin'  
is notably  
safe

No allergic reactions to 'Ilotycin' have been reported  
in the literature. Staphylococcus enteritis, anorectal complications,  
moniliasis, and avitaminosis have not been encountered.

Available in tablets, pediatric suspension, and I.V. ampoules.

*Lilly*

Let these experts on relaxing show you how to live with **HIGH BLOOD PRESSURE**

**PARKE, DAVIS & CO.**  
 235 North Dearborn Street, Chicago, Ill.  
 Sole U.S. Mfrs. of Elixirs, Tablets, Capsules, and Syringes

**How to select a family doctor**

**PARKE, DAVIS & CO.**  
 235 North Dearborn Street, Chicago, Ill.

**DO YOU KNOW THIS MAN ?**

**PARKE, DAVIS & CO.**  
 235 North Dearborn Street, Chicago, Ill.

There's a brighter outlook now for the child with **EPILEPSY...**

**PARKE, DAVIS & COMPANY**  
 235 North Dearborn Street, Chicago, Ill.

How many of these people need a doctor?

**PARKE, DAVIS & COMPANY**  
 235 North Dearborn Street, Chicago, Ill.

**IS THERE SOME OF HER SPIRIT IN YOU?**

**PARKE, DAVIS & COMPANY**  
 235 North Dearborn Street, Chicago, Ill.

When



# Virginia Medical Monthly

Vol. 81, No. 11  
WHOLE No. 1229

RICHMOND, VA., NOVEMBER, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## THE RELATION OF NEUROSURGERY TO GENERAL PRACTICE

WILLIAM T. SPENCE, M.D.,

Department of Neurosurgery, Georgetown Medical Center,  
Washington, D. C.,  
and

Consultant, Endocrinology, National Institute of Arthritis and Metabolic Diseases,  
National Institutes of Health,  
Bethesda, Maryland

One of the principal functions of the specialist in a singular field is to give the general practitioner all possible help in the treatment of his patients. The family doctor, whether he is a general practitioner or a medical internist, is the important link between any specialist and the patient. This link should be preserved and strengthened for the mutual benefit of all concerned. And those of us in a specialty need the help of the general practitioner in many ways:

First of all, the great majority of our patients come from him; the family doctor can give valuable information regarding the patient's illness, which he has followed for some time; having already established the patient's confidence, the family doctor can encourage, and at times insist on, consultation with a recommended specialist; he knows the home situation and members of the patient's family, e.g., a patient alone in the world develops a brain tumor at the age of 70 years. He should not be subjected to heroic measures to preserve his life as an invalid; he is able to carry out recommended treatment following consultation or operation. And, finally, it is the family doctor's responsibility to know which type of specialist can provide the most benefit for his patient. This concept is a new one, since many of the specialties overlap and several may be able to treat the same disorder. However, one specialist may treat the condition better than the other and the selective ability of the general practitioner is of the utmost importance.

Neurosurgery can be most helpful in the management of conditions which affect the brain, spinal cord, peripheral nerves, and the sympathetic nervous system. Manifestations of these conditions may be roughly tabulated as follows:

1. Injuries to the brain, spinal cord, and peri-

pheral nervous system. (These constitute a large segment of the specialty.)

2. Intractable pain, including the neuralgias, tic douloureux, cervical rib, and ruptured disc.
3. Tumors of the brain.
4. Tumors of the spinal cord.
5. Degenerative diseases of the central nervous system.
6. Cerebral vascular diseases.
7. Sympathetic nervous system disorders.
8. Congenital defects of the nervous system.
9. Miscellaneous conditions, such as Meniere's disease, torticollis, otitic hydrocephalus, etc.

In a meeting of this type it is obviously impossible to do more than touch the surface of methods of detection and treatment of these conditions. However, some helpful points can be made in brief form.

HEAD INJURIES can be divided into two types. Those considered as the *closed type* and the *open type*. The "closed" type may be classified in three groups: (1) concussion, (2) contusion, and (3) laceration and hemorrhages. The "open" type includes: (1) compound and depressed skull fractures, (2) penetrating wounds, (3) subdural hematoma, (4) epidural hematoma, and (5) certain rare conditions such as rhinorrhea, porencephaly, etc.

The period of unconsciousness is of practical concern as an index for gauging the severity of head injuries. A person who is unconscious for one to two minutes should have a period of rest of at least that day. Those unconscious for one to two hours should lead a quiet existence for about a week. It has been found experimentally that all repair to brain injury is complete within three weeks; therefore, it is not necessary to continue treatment of internal head injury beyond that time. It may be necessary to treat other manifestations of head



injuries for longer periods such as the care of cranial defects resulting from loss of bone in severe fractures. This condition can be corrected, however, at the time of original surgery (or anytime thereafter) by molding a sterile plastic dough into the area of missing skull. This is an inlay type of repair which I have developed and which is described in detail in the May 1954 issue of the *Journal of Neurosurgery*. There is no reason why general surgeons should not be acquainted with this method as well as other specialized types of therapy for cranio-cerebral injuries.

INTRACTABLE PAIN and its control is a great responsibility to all of us as doctors. It is especially important to the general practitioner who is closest to the patient. Although morphine continues to be a most effective drug, the use of any strong narcotic has many undesirable effects. I am sure all of you have seen patients with lingering legitimate pain become addicted from the continued use of pain-relieving drugs. Treatment by neurosurgical means solves many of the serious problems of intractable pain.

The reason the neurosurgical method is not used more frequently for treatment of intractable pain is that few people are aware of the relief which is attainable. However, it is true that a high percentage of cases of pain of facial neuralgia, for instance, can be relieved by decompression of the Gasserian ganglion. Intractable pain anywhere from the neck to the tip of the toes can be relieved by cordotomy. These operations carry a small mortality rate and the favorable results obtained more than justify the procedure. The sensory pathways can be cut in the brain stem if necessary to raise the sensory level to the face. This operation can be done to relieve pain on one or both sides of the body. The hospital period for any of these is about one week. Lobotomy can be carried out for relief of pain in hopeless terminal cases. In this operation all members of the patient's family should be apprised of and indicate their willingness to accept the mental changes which always accompany it.

Another difficult problem which is common in medical practice is that of back and extremity pain. Any pain which originates in the back and radiates into an extremity is, ninety-eight times out of a hundred, due to nerve root pressure. The most common type of nerve root pressure is the protruding

intervertebral disc. There are, of course, other types of nerve pinching, such as the presence of a tumor. Regardless of etiology, the syndrome of nerve pain is most efficiently treated by a neurosurgeon. A careful neurological examination must be made and very often the neurosurgeon must perform a pantopaque myelogram. I feel he must do this personally since only he is entirely aware of the neurological picture. He must also be prepared, at time of surgery, to deal with any condition involving the nerves that may make its unexpected appearance. After the nerve or nerve root condition has been treated, the neurosurgeon may need the help of the orthopedic surgeon to manage the structural bone problem which occurs in about 15% of conditions affecting nerve roots. In a recent series of 1000 disc operations, spinal fusion was necessary in 5% of the cases and was carried out in this number. One large insurance company, in a 10 year period, has not been able to return a single case of spinal fusion to his usual laboring occupation free from disability. So it seems better to remove the protruding disc first and consider the fusion later if necessary.

The operation for ruptured disc is accomplished by a partial hemilaminectomy, exposing the nerve and the disc between the lamina. In this way the structure of the back is not weakened. The average hospital stay is 5 days post-operatively and thereafter patients are able to look after themselves. A return to work is usual in an additional 5 to 10 days, depending on the type of occupation. The family doctor can be of help in interceding with the employer to take the patient back at an early date on part time or easy job status. This is extremely important in the overall economic scheme of the disabled patient. Many employers or their insurance carrier attempt to get rid of a patient who has a serious disability. The family physician can do much to protect the patient in this regard.

With the increased incidence of cases of ruptured disc and with more persons subjected to its accompanying problems, attention to the economic well-being of the patient assumes added importance. Homes have been lost and families broken up because of this harassing type of pain which renders the personality psychopathic and the individual miserable. The story is a familiar one. These patients try every type of patent medicine and the services of osteopaths and chiropractors, securing only the

same relief they would get from bed rest. Eventually their funds are exhausted. Oftentimes they will move to other parts of the country seeking relief in change of climate. Within my knowledge one patient with ruptured disc received expensive treatment of cortisone and ACTH for six months because of a mistaken diagnosis of arthritis. Most practitioners, however, are aware of the ruptured disc syndrome and pursue an honest approach, with early referral if their methods do not bring quick results. They can provide a valuable contribution to the health of the community since they see many of the patients suffering from this condition. As stated, they comprise practically all patients with pain in the back which radiates into an extremity.

Justification should be obvious for this surgical method of relieving extremity pain due to ruptured disc. Suffice it to say that in several hundred cases of discs that I have operated, 98% of these patients are back at their original employment without any appreciable disability. I think it is a scientific sin that many intelligent doctors still do not accept an operation with such a high record of success.

BRAIN TUMORS are among the commonest affections of the nervous system. They have become more commonly known since the medical profession in general recognizes their incidence. In spite of this fact many patients still die undiagnosed. This is especially tragic since the operative mortality has been reduced to about 10 or 15 per cent. In 400 cases operated on by Horrax, 224, or 56%, of the tumors could be completely and permanently relieved. "Twenty-seven of these patients, or 12%, died following operation and 10 died some time later, leaving 187 patients in which the tumor was eradicated. One hundred sixty patients, or 71% of the entire 224, are leading useful lives with little loss of function." This should stimulate men in medical practice to keep this condition in mind.

Brain tumors cannot be discussed as a group because they are all different. The general consideration of intracranial pressure, however, is common to most all of them and we must look for more than the old stand-bys of headache, vomiting, and choked discs if we are to make progress in discovering more of these neoplasms. Bucy stresses that the only true symptom of intracranial tumor is the gradually progressive loss of neurological function. We can, therefore, consider brain tumors in the light of both

general and local symptoms. Increased intracranial pressure may result from: obstruction to CSF, reduction of intracranial space, obstruction of absorbing mechanism, and obstruction to venous drainage.

The most common symptoms produced by increased intracranial pressure are headache, vomiting, choked discs, and stupor—usually appearing in this order. Focal symptoms will depend on the area of the brain that is being stimulated by a small tumor or paralyzed by more advanced growth. Generalized epileptic convulsions which do not differ in any way from the idiopathic type are common in cases of intracranial tumor. This is the reason all convulsive cases should be thoroughly studied to rule in or rule out the possibility of a tumor. It is true that many such thorough neurological investigations result in negative findings. On the other hand, the procedure is very worth while, since it assures us that we are not overlooking a condition that could be improved by a specific treatment. This thoroughness should also be appreciated by the patient's family. It is far better to do many cerebral air studies, spinal punctures, etc., and get negative results on many patients than it is to miss one patient with a brain tumor. These tests have a nearly zero mortality rate when a tumor is not present, the disability is short, and the information derived is extensive. Cerebral atrophy can be diagnosed only by this means.

Other tests of importance in diagnosing brain tumors are the EEG, the x-ray, and visual studies. The EEG will show a disturbance in the brain waves in 70% of patients with brain tumor. It has a slightly higher batting average in detecting convulsive disorders. This test, however, is like a blood count or urinalysis and it should not be interpreted as a conclusive diagnostic procedure. It serves only to supplement the neurological examination. Since it is painless and without danger, it can be used freely. However, its cost is greater than the illustrative tests mentioned and for this reason it should be reserved to only those cases that warrant it. It should not replace a careful, competent neurological examination.

The types of brain tumor are too numerous to elaborate at this time, except to emphasize that the most common brain tumor in adults is the astrocytoma, which occurs in 37% of diagnosed cases. It is the slowest growing of all gliomas and there are many cases alive after 10 or 15 years following sur-

gical removal. Brain tumors in children present a much gloomier picture. This is true because of a high percentage of medulloblastoma which comprises 12% of all gliomas in children and is universally fatal. Some cases live as long as 3 years.

SPINAL CORD TUMORS are so rare that they should probably be omitted from a general discussion of this type. There are, however, easy neurosurgical methods of detecting this rare type of disturbance affecting the spinal cord. Pay particular attention to anyone complaining of back pain which awakens them or is most disturbing in the morning.

DEGENERATIVE DISEASES of the brain constitute a large group, of which cerebral atrophy is the most prevalent. This condition may stimulate brain tumor or epilepsy. Convulsions are common and should be controlled with the usual cerebral depressing drugs *after* tumor has been ruled out. If discovered at an early period, it can be helped by increasing the blood supply to the brain. This is done by cervical sympathectomy and by medical sympathetic aids. The same procedure can be carried out with cerebral thrombosis. Here, again, it is important to accomplish at least the temporary blocks at an early period before the brain has been deprived of blood for too long a period, although even several days after the incidence the procedure may have considerable value in preventing more extensive thrombosis. Some of the other degenerative lesions, such as multiple sclerosis, etc., have no specific treatment. Very high doses of vitamin B<sub>12</sub> may be helpful.

CEREBRAL VASCULAR DISEASES are discussed under sympathetic nervous system disorders, except for the condition of intracranial aneurysm. This condition should be suspected in the occurrence of subarachnoid hemorrhage in the young or middle-aged person. These patients should have the benefit of cerebral arteriography. If aneurysm is found, it should be surgically controlled to prevent bleeding again. The mortality of ruptured aneurysm is about 30% with the first attack. Fifty per cent of those patients surviving a first attack will die with the second attack of leakage, which usually occurs within three weeks. In view of statistics like this, I feel that we are committed to attack this problem with courage. I personally have 5 patients now living and well with metal clips on vessels that have once bled. Other neurosurgeons have a much larger

series. The procedure is an accepted form of treatment by all reputable neurosurgeons.

SYMPATHETIC NERVOUS SYSTEM DISORDERS include: cerebral thrombosis, cerebral atrophy, causalgia, angina pectoris, and disturbances of the circulation in the extremities, such as Raynaud's and Berger's diseases. The carotid sinus syndrome should also be mentioned. The treatment principle in all these conditions is to render the blood vessels less sensitive to the constricting action of the sympathicomimetic system. It is common knowledge that a thrombosis throws adjacent vessels into spasm. In advocating sympathetic block and sympathectomy for cerebral thrombosis, I do not mean that devitalized brain tissue can be revived. I do mean, however, that a neurological deficit due to spasm of surrounding vessels can be relieved to a great extent by interrupting the sympathetic impulses. Sometimes results are dramatic in the return of function; often there is no change. The procedure of novocain block is easy, safe, and inexpensive. If there is any indication of benefit from the block, a superior cervical sympathectomy should be done, if the condition is chronic. This procedure also has the favorable attributes of ease, safety, and reasonable cost. At the time of sympathectomy, the carotid artery can be explored and if a clot is present it should be removed. This has been done in five cases of thrombosis of the internal carotid artery. In each case the thrombus was a hard, calcified plug. One case made a dramatic recovery and remained well for 3 years:

Mr. A. De. G.—Age: 46 years, had a gradual onset of weakness in the right arm, which eventually included a complete global aphasia. An arteriogram showed obstruction of the internal carotid artery at the bifurcation in the neck. The vessel was opened and a hard, calcified thrombus was removed. This thrombus extended distally into the internal carotid artery for a distance of 1.5 cm. The vessel wall was sutured with fine silk. An arteriogram made one week later showed a normal cerebral vascular pattern. The patient made a slow recovery, but regained all functions of speech and right-sided motor function, except for fine movements of the fingers on the right hand.

CONGENITAL DEFECTS OF THE NERVOUS SYSTEM bring to mind two rather common conditions which should occupy a minute or two of attention. The first of these is hydrocephalus. It is unwise to be



a defeatist and feel that nothing can be done in this field. I have seen patients, treated by Drs. Putnam and Scarff over 15 years ago, who are normal, healthy individuals—going to school like other children and giving their families the happiness they deserve for demonstrating their confidence in the neurosurgical treatment of this condition. In these cases, the choroid plexus was destroyed by cauterization and thus the spinal fluid was markedly reduced at its source. There are other procedures that are effective, but only when you, the doctors in the first echelon, refer the patients at an early age.

The second condition which is so successfully treated by neurosurgical means is the premature closure of one or more sagittal sutures. This results in a long, narrow head (scaphocephaly), or some other disturbance in shape, such as "turret" head, etc. In this condition the brain does not have proper space for normal growth and an operation is necessary to provide this space. The gratifying results obtained from neurosurgical treatment of these abnormalities make it a grave offense to overlook the opportunity of such treatment. If you fail to guide them into proper hands at an early age, they will be mentally retarded.

Other congenital deformities, such as spina-bifida, etc., are all worthy of at least neurosurgical consultation.

MISCELLANEOUS CONDITIONS such as Meniere's disease, torticollis, otitic hydrocephalus, etc., all have a specific neurosurgical treatment, if they are severe enough to warrant it. To determine the severity, these patients should have the benefit of neurosurgical opinion.

Although it has been possible to discuss these conditions only briefly, considerable care has been taken in selecting the subjects included. I believe that the physician in general practice can expect and get much help from the neurosurgeon in the types of cases discussed. In turn, the neurosurgeon must depend upon the general practitioner for many aids to the patient. For his intimate knowledge of the patient's background, for the direction of the patient to specialty consultation in ample time, and for his continued concern and assistance with the patient's economic and physical well-being. Especially in the new concept of selecting the particular specialist who can provide maximum benefit for his patient, the general practitioner can strengthen the link of mutual benefit for all.

---

### Number of Physicians Reaches New High.

A record graduation of 6,861 physicians during the past year by our nation's medical schools has boosted the ratio to an all-time high of one physician for every 730 persons in the United States. This ratio will be lowered even more in the next few years as the number of medical graduates is expected to rise due to the continued expansion of the country's medical schools.

Today's physician population has now reached approximately 220,100. The record graduation figures were released in the 54th annual report on medical education in the United States by the American Medical Association's Council on Medical Education and Hospitals.

Highlights of the report:

\* Enrollment of 28,227 is largest number of medical students in history of U. S.

\* Freshman class enrollment of 7,449 also is a record.

\* More than 76 million dollars was spent during 1953-1954 for new facilities, remodeling or completion of buildings for medical instruction.

\* Budgets for medical schools during 1954-1955 total more than 143 million dollars.

\* 21,328 physicians did volunteer teaching without pay during the year.

\* Ten new four-year schools are in construction or planning stages and will be in operation within the next few years.

The ten new four-year medical schools will be at the Universities of California, Mississippi, Miami, Missouri, Florida, West Virginia, Kentucky, North Dakota and Yeshiva University of New York and Seton Hall University. In addition, three other medical schools are being considered.

## BRONCHIAL ASTHMA— Diagnosis and Management\*

J. WARRICK THOMAS, M.D.,\*\*  
Richmond, Virginia

During the past quarter of the century there have been many advances in all fields of medicine and it has been an interesting observation to watch the advancement in the field of allergy and particularly in the handling of asthmatic patients. Those of us who have taken up the specialty of allergy and have been fortunate enough to have had specialized training in this field can appreciate the necessity for handling our patient as a whole and not to attempt to treat one particular symptom or system of the body. In other words, we must go into a systematic investigation of patients complaining of dyspnea, wheezing, or bronchial asthma or other allergic manifestations in a manner that will enable us to arrive at an accurate diagnosis and set up a program of management on a firm foundation.

For purposes of simplicity in the discussion of diagnosis and management of bronchial asthma, I will group my remarks under the following headings: 1. Criteria for diagnosis of bronchial asthma. 2. Differential diagnosis of bronchial asthma from other causes of dyspnea and wheezing. 3. The management of acute attacks of asthma and or *status asthmaticus*. 4. The management of chronic asthmatics and recurring attacks. 5. Diagnosis and management of bronchial asthma, specifically for children, from infancy to early childhood.

### CRITERIA FOR DIAGNOSIS OF BRONCHIAL ASTHMA

Bronchial asthma may be characterized by cough, wheezing, dyspnea, orthopnea, cyanosis, expectoration, prolonged expiration, symptomatic relief by sympathomimetic drugs and recurrent attacks. The importance of history taking in the investigation and handling of allergic patients cannot be over-emphasized. In general, there is considerable lack of uniformity and a variance of methods of taking a detailed history. The significant features to be elaborated in *chief complaint* are descriptions of typical attacks, onset, whether sudden or insidious, asso-

ciated with major attacks or mild attacks, and the determination of cardinal symptoms and whether there was accompanying fever and pain. The severity of the attacks may be classed mild, average or severe. It is well to bring out frequency, duration of the attacks, and whether the symptoms are constant in terms of hours, days, weeks, or longer periods. Seasonal exacerbations are significant not only in the diagnosis but also in the treatment. The relationship of geographic locations, changes from one section of the country to another are noteworthy, as is weight loss or recent periods of weight gain. Environmental contacts include not only the patients' residence, but the details as to the surroundings of his residence, including bedroom, grounds, neighborhood, occupation, effects of temperature, wind, rain, or other climatic factors, habits of bathing, contact with other persons, relationship of symptoms, and the effect of hospitalization.

Non-specific factors which may be considered include infections or foci with or without fever, or other associated allergic manifestations or complications. Gastro-intestinal upset, emotional factors, physiological disturbances, including menstruation, pregnancy, or a menopausal syndrome should also be considered.

Foods, habits, likes and dislikes, relationships of symptoms and meals, or associated gastro-intestinal distress are worthy of consideration.

Drugs taken include frequency or infrequency of ingestion of drugs, either by mouth, locally, parenterally and those drugs the patient has had, giving relief or no relief. It is well to determine the patient's response to common symptomatic measures, including sedatives, analgesics, and determine the patient's response to the various antibiotics, and any drug sensitivities should be recorded.

Other manifestations of allergy should be carefully enumerated as their existence enhances the diagnosis of an allergic etiology in the bronchial asthma.

A significant family history, including parents, brothers, sisters, grandparents, aunts, uncles, with lists of manifestations, are of definite value.

A detailed physical examination is extremely im-

\*Presented at the fourth annual Scientific Assembly of the Virginia Academy of General Practice and a Section of the Virginia Chapter of American College of Chest Physicians, Jefferson Hotel, Richmond, Virginia, May 5, 1954.

\*\*Assistant Professor of Clinical Medicine, Medical College of Virginia, Richmond, Virginia.

portant, noting the characteristic posture of the patient during acute attacks of bronchial asthma, as well as anxiety and variations in physical findings. Possible associated evidences of bronchial asthma during remissions, include emphysema, chest deformities, increase in anterior and posterior diameter of the chest, as well as a reduction in the vital capacity. Other evidence of the presence of an allergic state includes the various systems and one should particularly search for ocular, nasal, pharyngeal, bronchial or dermal manifestations of allergy.

Diagnostic procedures including sensitization studies which may be divided into dermal, including scratch, intradermal, patch, or passive transfer tests, as well as mucous membrane studies with ophthalmic or nasal contact tests. Other diagnostic aids include the use of food diaries, elimination diet, clinical exposures, inhalation, injection as well as the ingestion of potential offending allergens.

It is well to classify the major offending agents into groups of inhalants, injectants, infectants, as well as physical agents, and there may be miscellaneous contributing factors, including those of endocrine, psychosomatic, and biochemical types. Noteworthy laboratory procedures include examination of secretions for eosinophiles, which may have a variance of 5% to 20% in the blood, and in the sputum or nasal secretions it is not uncommon to see up to 95% or higher. Routine laboratory studies in asthma are important as in other conditions, and, in selected cases, certain blood chemistries are of infinite value, including CO<sub>2</sub> combining power, blood sodium, potassium, chlorides, sugar, and, in certain instances, a sedimentation rate, and particularly a total eosinophile count may give worthwhile information.

#### DIFFERENTIAL DIAGNOSIS OF BRONCHIAL ASTHMA FROM OTHER CAUSES OF DYSPNEA AND WHEEZING

In the consideration of the differential diagnosis of bronchial asthma from other causes of dyspnea and wheezing, one not only has to consider those aids as outlined above under Criteria for Diagnosis of Bronchial Asthma, but, in addition, other laboratory supplemental aids, including roentgenographic studies, bronchoscopies, lipiodol bronchograms, vital capacities, electrocardiograms, etc. It is necessary that one exclude obstruction to the larynx, substernal goiter, membranous croup, foreign body in the bronchus, retropharyngeal abscess, aneurysm, neoplasm, tuberculosis, Hodgkins, disease, Loeffler's syndrome,

tropical eosinophilia, bronchiectasis, silicosis, cardiac asthma, heart disease, psychosomatic disturbances, enlarged thymus, and other conditions.

The causes of wheezing include etiological factors, as atopy, infection, physiological, cardiac, psychodynamic, chronic lung disease, bronchial obstruction, etc., resulting in bronchial narrowing from spasm, edema, and secretion, all of which may produce wheezing.

The more frequent complications include emphysema, bronchitis, bronchiectasis, atelectasis, or massive collapse, allergic conditions and lung abscess.

In the *Journal of Allergy*, Swineford<sup>1</sup> has presented an excellent article in which criteria are presented by which cause of wheezing can be recognized and classified into: "Atopic (allergic and infectious); group 2, reflex, psychogenic, physical and chronic lung disease; group 3, cardiac, bronchial obstruction, and idiopathic." He further sets forth reasons for the adoption of this classification.

#### MANAGEMENT OF ACUTE ATTACKS OF ASTHMA AND STATUS ASTHMATICUS

The non-specific treatment of acute attacks of bronchial asthma usually includes the use of epinephrine or adrenalin, 1/1,000, in dosages of 0.2 cc. up to 1.0 cc. hypodermically, or epinephrine, 1/100, by Aerosol in adequate doses to control symptoms and the avoidance of an adrenalin reaction. Repeated doses of both of these preparations may be considered after an interval of five to ten minutes and it is of value in certain cases to give repeated small doses subcutaneously if the patient does not respond to the initial dose.

As stated above, the most important drug in the treatment of bronchial asthma is epinephrine. Every physician should always have this drug available in 1/1,000 solution for intramuscular administration, and repeated small doses in multiple locations in amounts of 0.2 cc. to 0.5 cc. are preferable to larger doses, which may give some local vasoconstriction, preventing the absorption of the drug. Epinephrine is either peanut oil or sesame oil, in dilutions of 1/500, has a more prolonged reaction; however, one must recognize potential sensitivity to the oil or vehicle. It is important to use a dry syringe to prevent too rapid absorption of such a drug. Intravenous epinephrine 1/1,000 may be given in doses of 1/2-1 cc. as an infusion in 500-1000 cc. of 5%



glucose or saline. The rapidity of flow should be gauged according to the patient's tolerance. Nebulization with epinephrine 1/100, Isuprel, 1/200, Lilly's Aerolin Compound, Asthmanephrine, and similar drugs are very worthwhile when used in a DeVilbiss #40 nebulizer. Following this type of inhalation therapy, the patient should be instructed to gargle with water immediately and expectorate same as these drugs frequently constrict the mucous membranes and may produce secondary coughing.

Mild sedatives and antihistaminics such as Benadryl or Phenergan may be worthy of consideration at night. Patients having severe bronchial asthma or *status asthmaticus*<sup>2</sup> require hospitalization, preferably in a private room. It is desirable to minimize the patient's exposure to common allergens such as dust and feathers and one should insist on a dust-proof mattress and pillow cover for the patient, or the use of a rubber mattress and pillow. It is desirable in certain instances to have these patients in an air-conditioned environment, controlling the exposure to dust and pollens. This is particularly desirable during a pollen season; however, some patients do not tolerate air conditioning.

These patients should be kept as quiet as possible and given plenty of reassurance. Psychotherapy is extremely important in many of these acutely ill patients who feel that they are on death's bed. Dietary restrictions are warranted depending upon the patient's symptoms and known or suspected food allergies. In those cases that are severely or acutely ill, nasal feeding or Levine tubes, which may be left in place for several days, is extremely important, particularly if the patient is too weak to eat or to take adequate fluids. It is also desirable to reduce gastric distention with aid of a Levine tube. Oral medications may be administered through this route.

It has been said that hydration of a patient is one of the cardinal therapeutic adjuvants. In those patients who are not taking adequate amounts of fluids by mouth, glucose may be given intravenously in either 5% or 10% solutions in water or normal saline. At times, it may be desirable to administer 50% glucose in combination with 0.1 cc. of epinephrine, 1/1,000 intravenously, particularly if there is considerable moisture in the chest. The use of intake and output charts are extremely valuable to determine the patient's state of hydration and elimination.

Next to epinephrine, aminophyllin is one of the most important if not the most important therapeutic agent in the handling of those patients with *status asthmaticus* or termed as being "epinephrine fast". The intravenous administration of aminophyllin in dosage of  $3\frac{3}{4}$  grains to  $7\frac{1}{2}$  grains given very slowly in amounts of 1.0 cc. per minute often are very effective and dosages may be repeated at specified intervals of every 8 hours or may be given when necessary. I have found it advantageous to give rectal aminophyllin, grains 3 to  $7\frac{1}{2}$ , dissolved in water in combination with chloral hydrate, 10-30 grains, as a retention enema, twice daily or more frequently, depending upon the patient's need. Often, these patients who do not tolerate suppositories find these retention enemas offer them rapid relief and are tolerated quite satisfactorily.

The sublingual use of sympathomimetic drugs, such as Isuprel, in doses of 5-25 milligrams, or Nephthalin tablets, taken sublingually for five minutes and subsequently swallowed, offer asthmatics at times rapid symptomatic relief.

The above mentioned broncho-dilating drugs have rather rapid action and the Nephthalin is a combination of the rapid and slower acting broncho-dilators. Other slower broncho-dilators are Ephedrine in doses of  $\frac{3}{8}$  to  $\frac{3}{4}$  grains and Desoxyn, Nephedamine, Propadrine, Orthoxine, which may be of value given orally, alone or combined with Theophyllin drugs and sedatives. These may be obtained under the trade names of Amodrine, Tedral, Amesec, etc.

On occasions, the intramuscular or intravenous use of antihistaminics, such as Benadryl and Decapryn, are effective in bronchial asthma, particularly in those cases resulting from drug or serum reactions. These antihistamines have an excellent sedative reaction in selective cases.

Hormones may be given orally in the form of Cortisone, in divided dosages, at 8 hour intervals in amounts varying from 50-100 milligrams per dose with a descending scale of dosages over a period of several days.

ACTH may be administered in 500-1000 cc. of 5% glucose intravenously over a period of 12-48 hours or given intramuscularly in dosages of 10-40 units every four to six hours. The use of these hormone drugs improves the vital capacity, appetite, physical activity, as well as giving the patients a sense of

well being. It is necessary to continue other therapeutic measures usually during the initiation of therapy with these hormones. However, these may subsequently be withdrawn from the therapeutic program. Acthar Gel in amounts of 10-40 units intramuscularly over a period of several days at intervals of 12-24 hours has proven to be very helpful in selected cases.

Expectorants, such as potassium iodide, given alone or in combination with Fowler's solution, have been in use for many years. Arsenic in the form of Fowler's solution must be given with extreme caution. This drug happens to be one of the important ingredients in a mixture given many asthmatic patients by a Dr. Gay, of Biloxi, Mississippi. Other expectorants include syrup of hydriotic acid in doses of 2 cc. to 5 cc., ammonium chloride in the form of enoseals, grams 1, q.i.d., fluid extract of ipecac, 1 to 4 drops, or larger doses in older patients.

Adequate sedation is extremely desirable in these patients to allay apprehension and to enable them to get adequate rest. Chloral hydrate in dosages of 15-30 grains, by mouth or per rectum, given alone or in combination with sodium bromide, in dosages of 20-40 grains is one of the most efficacious sedatives. Barbiturates, including sodium phenobarbital, Nembutal, Seconal, Amytal, Sodium Amytal, are of definite value. Paraldehyde may be given rectally and occasionally intramuscularly in dosages of 2-10 cc. The intravenous use of barbiturates as an anesthetic is contraindicated. Ether may be administered by inhalation or *per rectum* in combination with oil, in equal amounts in combined dosages of 5-7 ounces and 1½-2 ounces for children, depending upon their weight. Sweet oil, cottonseed oil, peanut oil, olive oil may be used, but care must be exercised to prevent the patient from receiving an oil to which he is allergic. The use of a small catheter in the administration of these retention enemas is important to prevent the expelling of the material. A re-breathing tube should always be available when this type of therapy is employed.

Oxygen may be administered by one of several methods, either nasal, mask or tent administration, depending upon the age of the patient and the degree of dyspnea and cyanosis and the equipment available. Other modes of administration include the open and closed mask method. Combinations of helium and oxygen, 20% oxygen and 80% helium is

more effective than oxygen alone in certain hands, as this mixture enables the patient to breathe more comfortably with less effort.

Bronchoscopy is frequently employed to remove tenacious mucous plugs and may be a life-saving measure on occasions. A local anesthetic is not necessary when bronchoscopy is performed in patients with severe bronchial asthma. Should one be used, precautions should be exercised in those cases, as these agents sometimes may cause fatal reactions.<sup>3</sup>

#### MANAGEMENT OF CHRONIC ASTHMATICS AND RECURRING ATTACKS

In addition to the above mentioned measures for the control of acute asthma, one must consider, in these individuals having recurring or chronic asthmatic attacks, other forms of therapy. Particularly, one should consider broncho-dilators, such drugs as delayed action Tedral and Amodrine, Ephedrine, Nephrenamine, given alone or in combination with other drugs, are found to be beneficial. Expectorants in the form of potassium iodide or combined with Fowler's (arsenical) solution or the use of enteric coated ammonium chloride in dosages of grams 1, several times a day, and Robitussin prove efficacious. Asthma powders in certain patients appear to be helpful, the active ingredients being ammonium and nitrates. However, one must keep in mind that some patients may be allergic to asthma powders. Aerosol therapy with Alevaire facilitates postural drainage. It may be taken alone or in combination with a bronchodilator and antibiotics. This type of drug may be administered several times daily and amounts may reach as much as 500 cc. per day. Tryptar (Armour) has been found to facilitate the clearing of the bronchial passage of the thick, tenacious mucus.

Specific therapy includes avoidance, then elimination of the offending substances to which the patient is known or is suspected to cause trouble. Air filtering and air conditioning are of value in certain occupational causes of asthma and in pollen sensitive patients especially. Dietary restrictions are important in those cases with known food sensitivities. Initial dietary programs should be temporary and later modified by the addition of one food at a time unless such a food be proven to be a frank offender.

Hyposensitization with such allergens as inhalants, molds, pollens, epidermals and autogenous vaccines is indicated in those cases where complete avoidance

does not control the patient's symptoms.<sup>4</sup> Methods of hyposensitization with pollens include pre-seasonal, perennial, and co-seasonal treatments. Schedules should be followed carefully and modified according to the patient's tolerance and response to treatment; when there is too long a lapse of time between injections, reactions are more likely.

Reactions are divided into immediate and delayed types. The delayed reactions require a reduction of dosage. The constitutional reaction or the immediate reaction requires the application of a tourniquet proximal to the site of the injection and into the site of the injection, one should administer 0.1 cc. to 0.2 cc. of epinephrine, 1/1,000, and doses of 0.1 cc. up to 0.5 cc. may be administered in the opposite arm. Varying dosages of epinephrine may be repeated at few minute intervals depending upon the patient's symptoms. When there is evidence of anoxemia, oxygen therapy is mandatory. Auto-genous extracts are often of proved value when stock vaccines are ineffective in the management of specific therapy.

Breathing exercises are worthwhile in those patients having chronic dyspnea accompanying bronchial asthma or with accompanying emphysema.

Psychotherapy in selective cases has been found to improve the ambulation and progress of the patient. Foci of infection should be either excised or controlled by antibiotics.

#### THE DIAGNOSIS AND MANAGEMENT OF BRONCHIAL ASTHMA IN CHILDREN FROM INFANCY TO EARLY CHILDHOOD

The consideration of allergy in childhood and particularly the differential diagnosis and preferred methods of treatment have been presented in an excellent manner by a number of men including Glaser,<sup>4,5,6,7</sup> Peshkin,<sup>8</sup> Dees,<sup>9</sup> Unger,<sup>10</sup> Ratner,<sup>11</sup> and Bowen.<sup>12</sup>

Differential diagnosis of bronchial asthma from other causes of wheezing was brought out in the preceding section, and in dealing with children, in particular, one must exclude congenital stridors of various origin and suspected foreign bodies in the bronchi. Foreign bodies occur more commonly in infancy and childhood than in older age groups and these cases may simulate the signs and symptoms of bronchial asthma. In the consideration of the signs of bronchial asthma in children and adults, one must realize that the infantile type of respiration is

primarily abdominal, and gradually changes toward the adult type of respiration which is chiefly thoracic. Glaser<sup>7</sup> has reviewed further the principle differences, namely, "the dyspnea in infancy and childhood is not so characteristically expiratory as in older individuals; the asthmatic infant may appear relatively comfortable even when flat on his back, probably due to the abdominal type of respiration, together with the greater softness and flexibility of the thoracic cage; the absence of an expression of their anxiety on the part of the child is often in certain contrast to that of the adult." Capillary bronchitis or bronchiolitis in very young infants strongly resembles bronchial asthma accompanying an infection. The consideration of therapy in children not only warrants the above mentioned measures, particularly in patients with acute asthmatic attacks, and also *status asthmaticus*, but, in addition, children particularly should be put to bed in order to restrict their activities and to control changes of temperature and humidity to which they are subjected by ambulation. Steam inhalations particularly are advantageous in children when the air is dry. These may be supplemented by steam medicated inhalations, as suggested by Prigal<sup>13</sup>. Nose drops are of definite benefit, particularly in young children in the form of 1/4% Neosynephrine (Winthrop-Stearn) and others. These should be administered prior to nursing or the child's taking his formula, facilitating the swallowing and easier ingestion of the meal and, by so doing, to permit adequate nasal breathing. Personally, I feel that nose drops containing vaso-constrictor drugs in combination with antibiotics are of extremely limited value and are potential sensitizers. In children, as in adults, Demerol may be administered *per se* or in combination with a mixture of epinephrine. Demerol in dosages of 0.5 cc. to 0.8 mg. per Kg. of body weight may be given along with 0.2 cc. to 0.3 cc. of epinephrine, 1/1,000. Opiates, however, are generally contraindicated in the treatment of bronchial asthma on account of their depression of the respiratory center and an inhibition of the cough reflex.

Stoesser<sup>14</sup> has emphasized the point that the general practitioner pediatrician as well as the allergist should not tell the parents of a child that children will outgrow an asthma, as it has been proven recently that this is an error, as many children



are subject to repeated subsequent attacks. The statistics of asthmatic children treated by allergists show that 3% of these children, while they are on treatment may go ahead and have chronic asthma; however, of the children having asthma and treated by pediatricians and general practitioners, 20% of these children continue to have quite severe asthma and prove to be very difficult problems and at times permanent cripples.<sup>14</sup> We often note that asthma in children does not disappear spontaneously. These children will not outgrow it; we are going to see them later. If the skin of many asthmatic children is dry, this may be evidence of sensitivity of the skin in addition to the asthma, particularly in the popliteal and cubital areas and it is necessary for the doctor to hedge on the prognosis because these children are going to be dual problems of a combination of asthma and eczema. A number of children with asthma have definite food sensitivities and also inhalant sensitivities, and strict dietary programs are worthwhile.

Antihistaminics are used in large amounts by general practitioners and pediatricians both in the treatment for symptomatic relief of asthma. They work all right temporarily but frequently they peter out and cause more harm than good. Iodides are of extreme value, not only to loosen up an asthmatic cough, but as a preventive measure until the asthma is brought under control. The use of antibiotics in children as well as adults is extremely important, particularly in handling those asthmatics with superimposed infections. Bacterial sensitivity studies also indicate which antibiotic is most desirable as well as efficacious. The use of autogenous vaccines in both children and adults are of great value in selected cases.

## BIBLIOGRAPHY

1. Swineford, Oscar, Jr.: Asthma, Classification of Causes, *Journal of Allergy*, **25**: No. 2, Pp. 151-167, 1954.
2. Thomas, J. Warrick: Allergic Problems Demanding Prompt Treatment, *The North Carolina Medical Journal*, **12**: No. 7, Pp. 253-261, July, 1951.
3. Thomas, J. W., and Fenton, M. M.: Fatalities and Constitutional Reactions Following the Use of Pontocaine, *Journal of Allergy*, **14**:145-159, January, 1943.
4. Thomas, J. Warrick: Treatment of Bronchial Asthma, *Postgraduate Medicine*, **8**: Pp. 130-133, July, 1950.
5. Glaser, J.: Differential Diagnosis of Bronchial Asthma in Infancy and Childhood. *Ann. Allergy*, **4**:409 (Nov.-Dec.) 1946.
6. Glaser, J.: Management of the Child with Chronic Asthma, *Pediatrics*, **3**:96, 1949.
7. Glaser, J.: Office Management of the Allergic Child, *Am. J. Dis. Child.*, **77**:217, 1949.
8. Peshkin, M. M.: Asthma in Children, Etiology, *Am. J. Dis. Child.*, **31**:763, 1926.
9. Dees, S. C.: The Use of Aminophyllin Rectal Suppositories in the Treatment of Bronchial Asthma, *J. Allergy*, **14**:492, 1943.
10. Unger, Leon, *et al.*: Bronchial Asthma in Children and Results, *Annals of Allergy*, **10**:Pp. 574-582, (Sept.-Oct.) 1952.
11. Ratner, B.: The Management of Asthmatic Attack in Childhood, *Medical Clinics of North America*, **31**: P. 537, 1937.
12. Bowen, R.: Some Practical Suggestions in the Management of Asthmatic Children, *Medical Record and Annals*, **39**: P. 1189, 1945.
13. Prigal, S. J.: The Production of Aerosols from Medicated Solutions, *J.A.M.A.*, **131**:398, 1946.
14. Stoesser, Albert M.: Personal Communication, Roundtable Discussion, American College of Allergists, Miami Beach, Florida, April 8, 1954.

2031 Monument Avenue.

### Sets New Circulation Record

With its October issue, "Today's Health" (the popular health magazine published by AMA) will reach a circulation of more than 340,000 copies—the highest circulation figure in its 31 year history.

Much of this increase in circulation is due to the

diligent efforts of the Woman's Auxiliary which has promoted subscription sales at the national, state and local level. At the present time, "Today's Health" may be found in the reception rooms of more than 103,000 physicians and 45,000 dentists in all parts of the United States and its territories. Many thousands of patients see it every month.

## PRACTICAL ADVICE ABOUT HANDEDNESS\*

EUGENE M. CAFFEY, JR., M.D.

and

W. E. HARRIS, PH.D.,  
Richmond, Virginia

The topic of handedness, with its implications of the existence of cerebral dominance, has some general medical interest, and also is rich in possibilities for philosophical and metaphysical speculation, and in cultural, educational and psychological implications. The literature is extensive and not readily available, while the frequency of situations in which the question seems important is not great. These circumstances make it easy for a sort of medical mythology to be perpetuated to the detriment of both the practitioner and the patient. It is our purpose to present a very brief review of handedness and of cerebral dominance in neurophysiological and developmental terms to establish a basis for our attitudes towards the training of children in handedness, and towards the unimportance of cerebral dominance in the handling of reading and writing difficulties and of stuttering and stammering.

Throughout this discussion we are using this concept of handedness: A mature person usually uses one particular hand for most of the routine and skilled activities which involve a choice of hands, although frequently the hand of choice is only the "lead" hand in activities in which the two hands function in a complementary fashion. Throughout the discussion, too, is implicit the concept that the existence of handedness means that the cerebral hemisphere on the side opposite to the apparent dominant hand has developed a high order of integration of skilled activities, and that in this same dominant hemisphere will usually, although not always, be found also the specialized areas for language.

The origins of the functional patterns reflected in handedness are lost in dim antiquity. Very earliest man, it appears, from traces such as flints used to shape arrowheads and obviously designed to be used only by a left hand or a right hand, demonstrated some degree of hand preference. He also possessed some sort of speech. These phenomena of unilaterality: sharp restriction to one hemisphere of functional control of highly skilled movements and of

language are characteristically human. Hildreth<sup>1</sup> quotes careful studies on chimpanzees showing that right and left handedness is equally distributed, just as in the human infant. In agreement with this are the frequent observations that the feeble-minded populations show a high incidence of "left handedness" or, to put it another way, much less perfection in common right handed skills. The perfection of handedness as an adult characteristic, however, is not only the product of intellectual development but also involves a certain degree of social development. Studies of ancient man and anthropological data derived from studies of present day primitive societies show much less right hand preference than found in the communities of the highly organized and specialized Western World. For that matter, left handedness will be proportionately low in any civilized groups in which the common people learn to read and write, shake hands with one hand, eat with specified instruments and are employed in industries which require use of intricate tools.

In the very complex Western World with the high order of skills, both social and industrial, required of the average adult and the tremendous social pressures brought to bear on the developing child, somewhere between 1 and 30% of the population is left handed. The wide variation in these figures reflects uncontrolled variables such as the age levels of the subjects, their mental ability, the nature of the capacities tested, the frequency and types of observations made and the cultural background of the population studied, plus the use of excessively small groups. The best estimates seem to be those of Nielsen<sup>2</sup> (10%) and Hildreth<sup>1</sup> (5%—for older members of the population measured by skills that are directly taught, e.g., writing). According to Hildreth,<sup>1</sup> about 7% of younger school children on the average show strong left handed tendencies, with the proportion apparently increasing slightly in the years since World War I, possibly due to relaxed home and school attitudes in training children.

At times figures on handedness have been derived which coincide neatly with genetic computations. However, in our opinion no definite evidence has

\*Reviewed in the Veterans Administration and published with the approval of the Manager. The statements and conclusions published by the authors are the result of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

been presented which demonstrates without room for disagreement that there is a tendency for either right or left handedness to "run in families" on a hereditary basis (Hildreth<sup>1</sup>).

There is not only a lack of definite evidence that cerebral dominance is an inherited characteristic, but also there is no evidence that there is an observable structural difference between the two hemispheres. Orton,<sup>3</sup> the "father" of much of the investigation into the role of the two hemispheres in speech and language disorders, himself noted that the gross anatomical changes sometimes described between the two hemispheres are well explained by the very frequent mild skewness of the brain in somewhat shifted cranial vaults. There are no demonstrable differences in quantity of cells and fibers between the two hemispheres. In addition, there is no difference in the electroencephalographic pattern between the two hemispheres, nor a demonstrable difference in chemical functioning. On an anatomical basis, as Nielsen<sup>2</sup> says, the "hemispheres start through the world together, equally incompetent."

The development of specialized skills, such as handedness, in children will depend upon their capacity to utilize experience. With the increasing myelination of the afferent systems of the central nervous system, the responsiveness of the cortex to sensory stimuli develops in the infant. The electroencephalogram, at first showing potentials only during sleep, begins to show potentials during rest and excitation in response to distance receptors. Gradually the individual becomes capable of responding to environmental stimuli with finely graded reactions involving sensory and motor integration at the cortical level. The "adaptive responses thereafter increase in complexity with further age and further development of the brain through the utilization of individual experience and memory" (Gellhorn<sup>4</sup>). Neurophysiological data, then, suggests that the infant begins with equal potential of learning in each hemisphere and that the development of the central nervous system subsequent to birth and the patterning of neuronal relationships on the basis of contacts with the environment make possible the specialization in the use of one hand, and of unilateral organization of language patterns. This suggestion is bolstered by the observation that a child under two years of age (who will have already begun to show a trend towards the establishment of dom-

inance), suffering a cerebral accident resulting in the loss of function of the presumed dominant side, will show no real impairment of the development of speech or in skill with the remaining hand.

The suggestions in the physiological data seem borne out by the clinical observations of the development of patterns of handedness by Dr. Gesell<sup>5</sup> and his associates. They noted that lateral dominance of the cerebral hemispheres as reflected in a child's use of his hands fluctuated from one side to the other as the child developed, and that the rate of the development of definite hand preference varied from child to child. They felt that hand preference makes its appearance sometime during the second half year of life and is more marked after 18 months or two years, though for many years subsequently, definite predictions with regard to the pattern of handedness that will be displayed in adulthood cannot be made. Even after handedness is firmly established, the adult may use his "non-dominant" hand in the acquisition of highly specialized skills such as fingering a violin, suggesting that dominance is largely a matter of convenience rather than necessity.

In our opinion, the best explanation for the phenomenon of handedness is that it is the product of developmental integration; people are not born to be right handed but have learned to be; they have developed "habitual behavior influenced by circumstances of a strong and biasing character operating throughout the growth period" (Hildreth<sup>1</sup>). That there is a neurophysiological basis for response to the "circumstances of a strong and biasing character" seems indicated by Gellhorn's<sup>4</sup> discussion of the role of hypothalamic-cortical interchanges in the facilitation of cortical activity with its implications that strong feelings (such as those frequently engendered between parents and children) will strongly influence cortical processes, hence learning and resistance to learning.

We have concluded that it is erroneous to assume that individuals should not be trained in handedness. We feel that it is important for parents to train their children in handedness, using the basic principles of: persistence without forceful pressure, patience, acceptance of errors, and easily recognized rewards for good performance. From the beginning, the spoon should, for example, be offered to the child's right hand, but not jerked from his left if he should experimentally use that hand for a time. We are



concerned that the "training" actually not be a program "insisted" upon, but rather a subtle, gentle moulding of the trends in development as they make their appearance and are yet plastic.

At times much has been made of the serious speech or "nervous" problems that may ensue when a child is required to change handedness. That there can be serious emotional problems involved in radical revision of long established patterns of behavior, we are quite convinced; we are equally convinced that the difficulties reported are the result of such emotional factors and not of interferences with the basic patterns of cerebral dominance. If a child must change handedness due to injury or disease, the importance of emotional elements should be appreciated. If a child arrives at school age with a well established pattern of left handedness, it is not imperative to change; the relative increase in comfort in right-handed living should be weighed by an expert, following detailed history-taking, testing and observation, against the degree of fixation of the pattern, the child's emotional capacities, and the attitudes of family and school. If continuation of left-handedness seems in order, teaching methods should include demonstrations of the comfortable way to write in a left handed way, and both home and school should attempt to minimize the social distinctions unwarrantedly made about the presence of left-handedness.

In children who develop speech problems such as stuttering and articulatory disorders, together with those who manifest difficulty in the establishment of conventional reading and writing habits, current practice assigns only a negligible role to the question of handedness. Bradley<sup>6</sup> notes that the "frequent association of such a difficulty with left handedness or ambidexterity has proved to be coincidental rather than one of cause and effect." We know of no practicing speech pathologist who considers a change in handedness as a definitive part of treatment. Johnson<sup>7</sup> does not even mention the subject of handedness. He outlines instead what might be termed a "psychological" approach, making a number of suggestions for easing or eliminating emotional conflicts in the child, epitomizing his general orientation in his final suggestion to the mother, "Be as friendly and considerate to your own child as you would to a house guest." Another therapist (Glauber<sup>8</sup>) who has attacked the problem from a psycho-

analytic approach presents vigorous disagreement with the suggestion that the handedness of an individual or his cerebral dominance has anything to do with stuttering.

In the area of reading problems in children, a similar decline of the importance attributed to handedness and disturbances in cerebral dominance as etiological factors is evident. Gates<sup>9</sup> states the conservative viewpoint as follows: "At the present time, it might be said that the evidence of and the extent to which hand and eye dominance contributes to the difficulty in reading is by no means clear. The tendency, however, seems to be definitely in the direction of minimizing the importance of these factors." We are even more in accord with the viewpoints of Witty and Kopel<sup>10</sup> and of Fernald.<sup>11</sup> The first two found that 60% of deficient readers showed no evidence of mixed dominance and concluded that "mixed dominance has no correlation with reading ability as measured by standardized tests," and also "reversals (writing and reading backward) are correlated with immaturity and not with dominance." Fernald<sup>11</sup> found only 6 of 66 children with reading problems to have mixed dominance and concluded that reading problems are due primarily to bad reading habits inculcated in children who are introduced to reading before they were mentally able to grasp the material.

In carrying out treatment, then, the questions of mixed cerebral dominance and shifts in handedness have no important role. For example, we look upon stuttering as a veiled expression of hostility or resentment against significant persons in the stutterer's environment, and so feel that treatment should attempt to ameliorate the home situation engendering such feelings, if the stutterer is a child, or to change or modify his attitude toward himself and others if the stutterer is an adult. In either case an attempt should be made to teach the patient how to "stutter" in a less obvious, socially penalizing manner, thus reducing the anxiety level attending speech situations and enabling him to see himself as a less deviant person (Johnson<sup>7</sup>). In reading cases, after ruling out intellectual, visual, auditory and general physical factors, the child's emotional attitudes toward reading should be determined and the possibility explored that he may be using the deficiency as an attention-getting or retaliatory measure. After such issues have been clarified, the therapeutic prob-

lem will be one of motivating the child to learn a skill which will ultimately bring him satisfaction and of correcting or ameliorating home conditions so that he no longer "needs" his reading deficiency for conflict resolution.

#### SUMMARY

The question of the handedness of patients and what to do about it from time to time arises in the practice of every physician. Standard neurological texts throw little light on the methods of determining handedness, its causes, and its consequences, but there is an extensive literature which shows nothing that clearly substantiates the widely held opinions that there is something basically anatomical about handedness or that it "runs in families" on a distinctly genetic basis. The practical conclusion is that the modern world is a "right handed" world and that part of "bringing up children" should be a recognition of this fact, and, from the outset, subtle encouragement to the child to use his right hand in the development of skills. Once the "left handed" pattern has become established, usually not definitely apparent until school has been started, the decision with regard to changing is one that should be made following expert evaluation with particular regard for the emotional problems in child and parents that are present or may develop if changing is insisted upon. In the handling of speech and reading problems the role of cerebral dominance as a contributory factor has been increasingly minimized.

It is no longer the custom to attempt to modify handedness in order to prevent language disorders arising from "confusion between the two hemispheres."

#### BIBLIOGRAPHY

1. Hildreth, Gertrude: The Development and Training of Hand Dominance. *Journal of Genetic Psychology*, **75**: 197-275, 1949, and **76**: 39-144, (March) 1950.
2. Nielsen, J. M.: *Agnosia, Apraxia, Aphasia*. 2nd Edition, Hoeber, New York, New York, 1946.
3. Orton, S. T.: *Reading, Writing and Speech Problems in Children*. Norton, New York, New York, 1937.
4. Gellhorn, Ernst: *Physiological Foundations of Neurology and Psychiatry*. University of Minnesota Press, Minneapolis, Minnesota, 1953.
5. Gesell, Arnold, *et al.*: *The First Five Years of Life*. Harper and Bros., New York, New York, 1940.
6. Bradley, Charles: *Management of Behavior Problems in Children*. Medical Clinics of North America, (March) 1953.
7. Johnson, Wendell: Open Letter to the Mother of a Stuttering Child. *You and Your Child*, (April) 1941.
8. Glauber, I. Peter: The Nature of Stuttering. *Social Casework*, **34**: 95-103, (March) 1953.
9. Gates, Arthur I.: *The Improvement of Reading*. McMillan, New York, New York, 1940.
10. Witty, Paul and Kopel, David: *Reading and the Educative Process*. Ginn and Co., Boston, Massachusetts, 1939.
11. Fernald, Grace: *Remedial Techniques in the Basic Tool Subjects*. McGraw Hill, New York, New York, 1950.

*Veterans Administration Hospital.*

#### Wanted—80 Members of the A.M.A.

It is most encouraging to report that 1,920 members of The Medical Society of Virginia also belong to the American Medical Association.

This means that the Society needs 80 additional A.M.A. members if it is to be authorized a third delegate to the House of Delegates of the American Medical Association. However, it must also be mentioned that 100 of those now holding membership

have not paid their 1954 A.M.A. membership dues, and this counts against the Society.

New members of the Society wishing to join the A.M.A. can do so by sending a check for A.M.A. membership dues to the office of The Medical Society of Virginia, 1105 West Franklin Street, Richmond. Although dues are \$25.00 per year, those joining now need pay but \$12.50 to cover the remainder of 1954. Checks should be made payable to the American Medical Association.

## BRAIN ABSCESS ASSOCIATED WITH CONGENITAL HEART DISEASE—

### Report of Surgically Treated Case with Brief Review of Literature\*

J. M. MEREDITH, M.D.,

Department of Neurological Surgery, Medical College of Virginia,  
Richmond, Virginia

When intracranial symptoms develop in patients known to have congenital cardiac or pulmonary disease, the clinician usually thinks of cerebral embolus, hemorrhage or thrombosis; however, *brain abscess* is also a distinct possibility and neurosurgeons are more and more becoming aware of the likelihood of such a lesion, particularly when associated with congenital heart disease in children or adults. We have had such a recent case in a 22-year-old male patient. He had had the Blalock-Taussig operation with very satisfactory outcome several years before the onset of serious intracranial symptoms which required craniotomy, preceded by ventriculography, which showed a mass lesion in the left cerebral hemisphere. This proved to be a large encapsulated abscess in the left temporal lobe which was successfully drained by a simple catheter left *in situ* for several weeks in the abscess. The patient recovered and has been doing satisfactorily to date. Cases involving children will also be cited from the literature and brief comment on the known pathogenesis and methods of recognizing the syndrome pre-operatively will be presented.

Galbraith<sup>1</sup> of Birmingham, Alabama, in October, 1951, described his experiences with cerebral abscess in association with congenital heart disease. He stated that these patients may be in the sixth or seventh decade of life, although most clinicians are more familiar with the lesion in children. The onset is often associated with an upper respiratory tract infection. Usually in the fatal cases bacterial endocarditis or pulmonary suppuration is not found. It is believed now that seven per cent of congenital heart disease cases die of brain abscess and not of their congenital vascular disease. Forty or more of the cases that he reviewed in his own service and in the literature were single lesions, only two were multiple, making the lesion therefore more favorable surgically than might be supposed. Septal defects are common in the cardiac lesions under considera-

tion. The infection is presumed to go through the septal defect to the pulmonary artery, thus by-passing the pulmonary circulation. The premonitory symptoms are usually fever, vomiting and increasing stupor. One must be on the alert not to ascribe the symptomatology to a cerebral vascular accident incident to the congenital heart disease. Galbraith had three *personal* cases, two of which were operated upon and recovered, and one was discovered only at post-mortem examination. Often in the fatal cases the patients are given diagnoses of polycythemia and associated cerebral thromboses with congenital heart disease. In some cases, one must operate because of fulminating symptoms before the capsule has formed, which is usually not advisable or desirable, as all neurosurgeons are aware. At the time of Galbraith's report (1951) only seven of the forty-five cases operated upon in the literature had recovered. The usual neuro-surgical procedures recommended are to do a ventriculogram, localize the lesion in that fashion (as was carried out in our patient, reported in this paper), and then to drain the abscess by the simplest means—usually catheter drainage.

Naffziger and Stern<sup>2</sup> at the annual meeting of the American Surgical Association (1953) reported two cases of brain abscess associated with *pulmonary angiomatous malformations*, and hence the lesion under consideration is of great interest also to all thoracic surgeons. These writers stated that the arteriovenous by-pass in the lung may fail to filter infected emboli arising in other parts of the body, or such infected emboli may arise in the pulmonary lesion itself. An accompanying polycythemia may give rise to thromboses anywhere in the body from which emboli pass to the brain. Emboli may also lodge in cerebral softenings which result from primary brain thromboses. Most writers on this subject feel that bacterial infected masses do not lodge primarily in the brain as emboli in these cases, but that lowered oxygenation of the cerebral blood may predispose to abscess formation and thereby give rise to abscesses from bacteria which are constantly cir-

\*Read at a meeting of the Chicago Surgical Society held at the Medical College of Virginia, Richmond, April 6, 1954.



culating in everyone's blood stream.

Berthrong and Sabiston<sup>3</sup> reported (1951) on a study of 153 autopsied cases of congenital cardiac malformations with cyanosis in patients over one month of age seen at the Johns Hopkins Hospital. This analysis revealed 38 cases with significant intracranial lesions (25%). There were sixteen cases of fresh cerebral infarction and fourteen cases with foci of old encephalomalacia. Ten patients with intracerebral hemorrhage, gross or microscopic, were seen. *Four cases with brain abscess were encountered (2.9%)*. Consideration of the pathogenesis of the cerebral infarcts in these cases included the possibility of paradoxical embolization of the brain from venous thrombi through cardiac defects, cerebral embolization from cardiac thrombi, and *in situ* thrombosis. Cerebral necrosis as the result of serious local anoxia alone was considered an infrequent factor since many lesions were quite large and some showed specific vascular distribution. An occasional microscopic lesion could well be explained on this basis. Thromboses and infarctions were found in other organs. In the thirty-eight cases with cerebral lesions of all types, already mentioned, there were nine cases with thromboses or infarcts in systemic vessels or viscera, while, of the 115 cases without cerebral lesions, only 9 instances of such visceral lesions were found. They cited also the well-known tendency to thrombus formation in patients with severe polycythemia, often seen in congenital heart disease, including the patient reported in this paper.

Naffziger and Stern<sup>2</sup> reported two cases in each of which the acute and potentially lethal abscess produced the urgent clinical problem. Altogether, there are now four such cases recorded, i.e., brain abscess from pulmonary angiomatous malformations. The first of their two patients had no symptoms whatever of pulmonary disease and, with the exception of the chest roentgenogram which demonstrated the arteriovenous communication, there were no physical or laboratory findings suggestive of such a lesion. The second patient presented a life-long history of cyanosis and clubbing of the fingers and revealed polycythemia, decreased blood oxygen saturation and superficial cutaneous hemangiomas, in addition to the radiological demonstration of the pulmonary lesion. Each of their two patients was treated successfully for brain abscess, the pulmonary lesions not having been resected. They also stated that brain abscess occasionally comes from pulmonary

infection of more common origin, such as empyema and lung abscess. All neuro-surgeons are familiar with such lesions. Dr. Frank Glenn, in discussing the paper of Naffziger and Stern, added two cases from his own service of angiomatous lesions of the lung with resultant brain abscess. Thus it is well, when an arteriovenous lesion is found in the lung, to consider resection of that lesion for the added reason that, if it is not done, a brain abscess may very readily develop. Naffziger stated, in discussing the paper, that the percentage of brain abscesses from chest lesions appears to be increasing as the ear and sinus infections, so frequently the cause of brain abscess in the past, are now so reduced in numbers by the antibiotics as to be an almost negligible cause of brain abscess.

#### CASE REPORT

*White male, aged 22, with previous operation for congenital heart disease. Severe headache developed after bumping his head on a door. Subarachnoid hemorrhage suspected. Choked disc and stupor supervened. Ventriculography showed a left*



Fig. 1.—Photograph of the patient's hands at the time of the operation. Notice the distinct clubbing of all the fingers and both thumbs.

*temporal lobe lesion. Brain abscess drained with subsequent complete recovery.*

Daniel K, aged 22, was admitted to the Medical College of Virginia Hospital on August 19th, 1953, and discharged improved on September 11th, 1953. His chief complaint on admission (the history being supplied by the family as the patient was rather drowsy) was that he had severe headache for ten to twelve days before admission, associated with nausea. The headache was most severe in the frontal region.

His temperature had been elevated to  $102.4^{\circ}$  (mouth) for several days before admission. The patient was quite confused and slow in his responses. Three weeks before admission he had struck his head on the side of a door, not having been rendered unconscious, but his headache began several days later; in retrospect, he probably bumped his head due to a right homonymous hemianopsia caused by a brain abscess. His past history was that he had been a "blue baby" with clubbed fingers (Fig. 1) up to five years previously, at which time he had undergone the Blalock-Taussig procedure for relief of a congenital heart lesion after which he had shown marked improvement generally. He had grown quite tall, approximately six feet four inches in height at the time of admission. Brain abscess was considered before operation as with the history (as noted above), the finding of marked tenderness of the scalp in the left fronto-temporal region, nuchal rigidity, considerable fever, with headache and vomiting, blurring of the optic discs and a definite right homonymous hemianopsia, first demonstrated in the ward by one of the assistant resident neuro-surgeons, Dr. James Lyerly, Jr., and a right lower facial weakness with slight weakness also of the right hand and arm, and stupor, a brain abscess seemed possible in the left cerebral hemisphere.

**Laboratory Work:** The urinalysis was normal except for a trace of albumin. The blood count at the time of admission showed 21 grams of hemoglobin, 7,530,000 red blood cells (indicating a definite polycythemia so often seen in congenital heart disease) 14,000 white cells, 79% polys, 14% lymphs and 7% monocytes. The fasting blood sugar was 100 mgs.% and the blood urea 18 mgs.%. The flocculation test of the blood was negative. Skull x-ray films on August 20th, 1953, disclosed no bony pathological change or intracranial calcification of abnormal significance. The sella turcica was within normal limits. The chest film showed enlargement of the heart with a cardiothoracic ratio of 59%. There was bilateral congestion with some edema of the lungs and also pulmonary fibrosis. There was pleural thickening at the left apex.

After a forty-eight hour period of crystacillin and streptomycin therapy, a ventriculogram was carried out. The posterior horn of the left lateral ventricle could not be encountered with the brain cannula. The right posterior horn was tapped and approximately 12 cc. of slightly blood-tinged fluid removed

and replaced by filtered air. The ventricular fluid did not seem to be under any definite pressure. Skull films in various positions showed a definite displacement of the ventricular system (Fig. 2) to the



Fig. 2.—Ventriculogram made just before drainage of the abscess. Note the definite deviation of the ventricular system to the right side, including deflection of the third ventricle, caused by a left-sided temporal lobe abscess.

right from the left side, the third ventricle being crescent-shaped with the convexity to the right. There was definite failure of filling of the left temporal horn seen on the lateral views. A horse-shoe shaped skin flap was then outlined in front of and above the left ear, but a linear incision was made first in the center of the outlined skin flap about eight cms. above the left external auditory meatus. The dura was opened and a brain cannula introduced into an abscess cavity five centimeters from the surface of the left posterior temporal lobe (Fig. 3). Creamy, very foul-smelling pus exuded from the brain cannula and with the aid of gentle aspiration a total of 60 cc. of pus were removed and sent to the laboratory for studies. A number 16 soft French rubber catheter was inserted into the abscess cavity and approximately 50,000 units of penicillin, in a total of 5 cc. of saline solution, were slowly instilled into the abscess cavity. The catheter was secured to the scalp



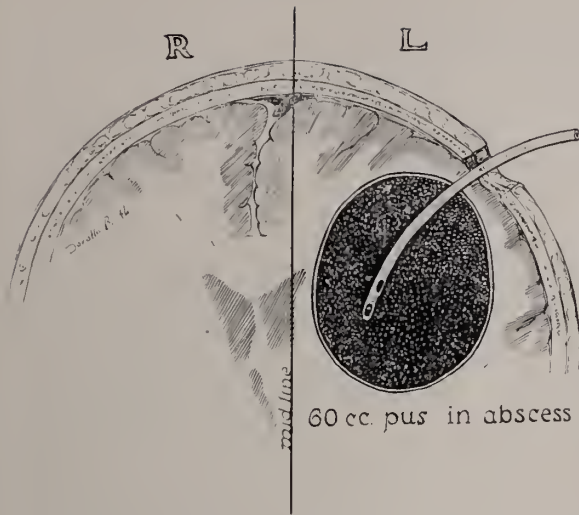


Fig. 3.—Artist's drawing of the brain abscess in the left temporal lobe. Note the single French catheter in the lumen of the abscess. This is left in place and occasionally shortened for approximately six weeks. About 60 cc. of pus were obtained from the abscess which contained, on culture, non-hemolytic anaerobic streptococci (see text).

and left in position for several weeks, being gradually shortened.

The pus was cultured and yielded a pure culture of non-hemolytic anaerobic streptococci as the pathogenic organism.

He made a very uneventful convalescence, the gross hemianopsia (right homonymous) improved greatly in the subsequent weeks and the patient, when examined approximately three months after operation (November 19th, 1953), was in very good condition. Visual fields made on November 19th (Fig. 5) showed marked improvement over those made on September 18th (Fig. 4) the latter fields being made

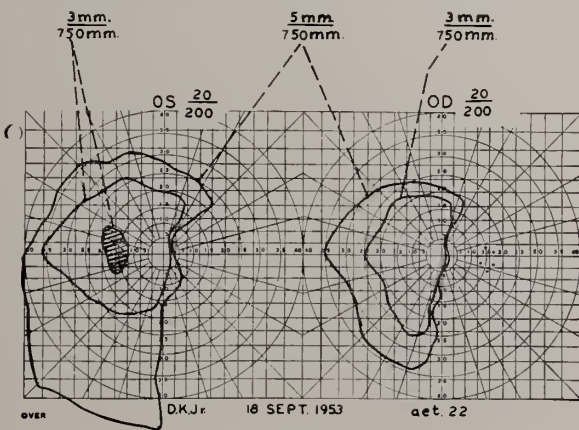


Fig. 4.—Visual fields made approximately one month after drainage of the abscess. At the time of operation, although the patient was drowsy, a definite right homonymous hemianopsia could be demonstrated by gross confrontation test. Note the definite right homonymous hemianopsia still persisting one month after drainage of the abscess.

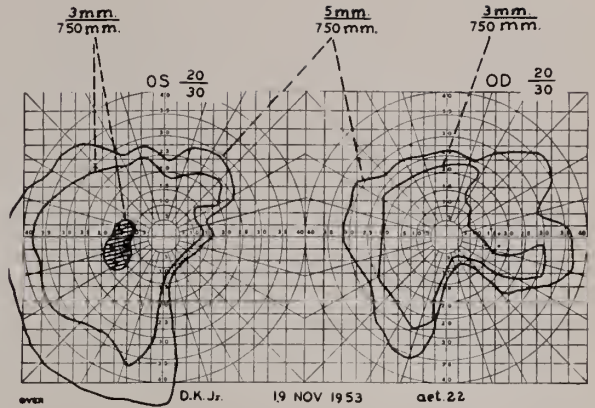


Fig. 5.—Visual fields made approximately three months after drainage of the abscess, two months after the fields shown in Fig. 4. Note the decided filling out of the right temporal and left nasal visual fields denoting marked improvement in peripheral vision. Note also the marked improvement in the visual acuity in these fields compared to those made two months previously (see Fig. 4).

approximately one month after operation. The right temporal and left nasal visual fields were filling out very satisfactorily within three months of the drainage of the abscess, the patient had little or no headache when seen three months after operation and was driving his car. He has continued to improve and is now symptom-free with excellent vision in each eye at the time of this report.

### SUMMARY

A case is reported of a brain abscess in the left temporal lobe in a twenty-two year old white male patient, which developed incident to congenital heart disease. The latter lesion had been operated upon five years before the brain abscess was drained. The literature is reviewed, similar cases are cited, and a brief discussion is made of the known pathogenesis of these lesions. The symptomatology is described that should lead to correct diagnosis before operation in the great majority of cases.

### BIBLIOGRAPHY

1. Galbraith, James G.: In paper "Cerebral Abscess in Association with Congenital Heart Disease", read before the thirteenth annual meeting of the American Academy of Neurological Surgery, Houston, Texas, October 19, 1951.
2. Naffziger, H. C., and Stern, W. E.: In paper "Brain Abscess Associated with Pulmonary Angiomatous Malformations" read before the 1953 annual meeting of the American Surgical Association, Los Angeles, California, April 2, 1953.
3. Berthrong, M., and Sabiston, D. C.: Cerebral Lesions in Congenital Heart Disease, *J. Neuropath. and Exp. Neurol.*, 10: 98-9, Jan., 1951.



**CAT-SCRATCH DISEASE—  
A REGIONAL LYMPHADENITIS OF  
NON-BACTERIAL ETIOLOGY\***

THOMAS N. HUNNICUTT, JR., M.D., F.A.C.P.,

and

CECIL F. EVANS, JR., M.D.,

Newport News, Virginia

Because many authors have stressed the importance of cat-scratch disease in differential diagnosis, and especially in gland biopsy, the two cases recently diagnosed in Riverside Hospital<sup>1</sup> should be reported.

This condition as a clinical entity was first described in the literature by Dr. Debre<sup>2</sup>, in 1950, though Dr. Fooshay, in 1932, while studying tularemia had recognized the disease and had prepared an antigen from suppurating glands. It was with this antigen that Dr. Debre tested his first case. He and his associates found it to be specific. Recently cases of Parinaud's<sup>3</sup> oculoglandular syndrome, which was first described in 1889, reacted positively to this antigen. This would indicate that this disease is not a new one but one that has gone unrecognized for many years.

Doctors Greer and Keefer<sup>4</sup>, in 1951, were the first to report a case in the United States. Their statement that "a cat contact is invariable" is now thought to be wrong, for many have reported the disease following splinter and briar scratches, wounds from metal fragments, insect bites, scratches from rabbits, and injury by a porcupine quill. Parinaud's cases were in contact with slaughter-house animals.

All attempts to isolate the causative agent by culture, special staining, and the study of sections of glands were unsuccessful until Dr. Mollaret<sup>5</sup>, in 1951, reproduced the disease in men and in a monkey. He described the morphology of the virus and the microscopic appearance of the nodes, dividing them into three stages.

Doctors Daniels and MacMurray<sup>6</sup>, in 1952, reviewed sixty cases of cat-scratch disease. They reported that the nodes of the head and neck were frequently involved. Occasionally glands were enlarged in unusual areas, such as the edge of the trapezius and pectoral muscles, and at the sternoclavicular articulation. They described the initial lesions as being varied, occurring as an inflamed

scratch, a raised purple or dusky red scar, red papules, a small ulcer (frequently scabbed or crusted), purple fang or puncture wounds, and a simple papule surmounted by a vesicle. Others have described a skin rash which varied from scarlatinall through macules to vesiculation. Erythema nodosum has been reported as well.

A recent, very comprehensive report and review was made by Dr. Rosenblum<sup>7</sup> from Tennessee. He pointed out that reoccurrence of signs of inflammation in the primary lesion with regional adenopathy should suggest the diagnosis of cat-scratch disease. He also noted the fact that this disease is apparently universal. Since 1952, many case reports of the disease have come from all parts of the United States; also from Australia, Belgium, Canada, England, Germany, Hawaii, India, and Italy.

Briefly, then, this entity has been reported under the following titles: Cat-scratch fever, cat-scratch disease, non-bacterial regional lymphadenitis, acute benign infectious lymphorecticulosis, Parinaud's oculoglandular syndrome, virus scratch lymphadenitis, and probably others. The condition is believed to be due to a virus that can be identified by special staining and diagnosed with an intradermal test when using an appropriate antigen; also by a complement fixation reaction, when humoral antibodies are present. The latter test is the most unsatisfactory. The biopsy specimen is suggestive if not always pathognomic.

The disease develops after a superficial, usually trivial injury; it is frequently, but not always, caused by cat scratches. In seven to forty-two days and following a short, mild illness regional adenopathy develops. Suppuration may or may not occur. Leukocytosis and higher fever curves precede this event. The disease may last from two weeks to seven months. One death has been reported following central nervous system involvement, but the course is usually benign. No specific treatment has been found.

\*Presented at the Regional Meeting of the American College of Physicians, Richmond, Virginia, February 25, 1954.

## CASE REPORTS

The first case, a white female, age 43, was seen in the office, November 27, 1953. The patient complained of a variable fever, night sweats, and lumps in her left thigh and groin. The symptoms had been present for three weeks or more. She also had had generalized abdominal pains, anorexia and malaise for two months. She had been treated for severe hypertension for six years and had been on a rice diet for a year. In January, 1953, she had a cervical cauterization and perineorrhaphy. February, 1953, an appendectomy, right salpingo-oophorectomy and suspension was done. An upper G. I. series was reported as negative just before she was referred. She was also reported to be a diabetic; the fasting blood sugar was 150 milligrams per cent, but the glucose tolerance was not diagnostic.

The examination revealed a thin, acutely ill, apprehensive woman, appearing older than her stated age. The oral temperature was 100.2 degree F. She had lost fourteen pounds in the past three months. The vision was poor and the eye grounds showed tortuosity and notching, without hemorrhage or exudate. The heart was enlarged and there was a systolic blow at the apex. The blood pressure was 220/118. There was moderate tenderness in the right lower quadrant. The inguinal glands on the left were enlarged, irregular, not tender, and their mass measured 3 x 6 centimeters. There were numerous superficial scratches over her lower extremities; none appeared to be grossly infected. A urinalysis was normal.

Hospitalization was advised with the tentative diagnosis of questionable thrombo-phlebitis and lymphadenitis. At this point the patient made the remark, "What will happen to my cats?" For the first time the scratches on her legs became significant. Until she stated these were made by her cats, it had been surmised that they had been caused by briars or finger nails.

The patient was hospitalized on November 27, 1953. The oral temperature continued around 100 degrees F. The initial blood studies showed 10.6 grams of hemoglobin with 17,850 w.b.c.. The polys were 72%, the lymphs 28%. The urinalysis was normal, blood serology and all agglutinations were negative. The next day the white blood count was 19,800. The polys were 80%, the lymphs 19%, and the monos 1%.

A surgical consultant was called on November 29, 1953. He did not think a thrombo-phlebitis

present but ordered 800,000 units of penicillin. This was discontinued and local heat to the groin continued.

On one of the cat scratches on the left leg there was a rounded, dark red, crusted lesion one centimeter in diameter. This had not been noted before, but the patient stated she had noted it for over a month.

Cat-scratch antigen could not be obtained locally.

Two weeks after admission the glands in the left inguinal region were fluctuant; at this time the fever gradually subsided and became normal. The blood count showed 14 grams of hemoglobin, with 12,250 white blood cells. The polys were 72%, the lymphs 20%, the monos 7%, the eosins 1%. All agglutinations were again reported as negative.

On December 14, 1953, 8 cubic centimeters of thick grayish-yellow pus were aspirated from the mass in the left inguinal region. This was cultured aerobically, anaerobically, and for fungus growth at room temperature and 37 degrees C. Some was planted on Petragani. No growth resulted and no organisms were seen on direct smear.

An antigen was prepared from this pus by diluting it one to five with normal saline. It was heated to 56 degrees C. for one hour on two successive days. After proving this antigen sterile, .1 cubic centimeter was injected intradermally on December 21, 1953. Forty-eight hours later the test was positive. A control (one of the authors injected himself) was negative.

On December 28, 1953, the mass was again swollen and fluctuant, when 6 cubic centimeters of pus were aspirated. A week later 5 cubic centimeters were aspirated. Since then the glands have remained flat and no sinus tract has developed. There are no symptoms referable to this disease, and except for a dark red discoloration, the inguinal region is normal.

Case two, O. H., a white female, age 30, was referred to the office January 11, 1954. The patient complained of a swelling in her right groin that was painful on walking. This was first noted December 31, 1953 (11 days). About the same time she noted an afternoon fever, generalized abdominal pains and aching in her legs. She had also noted a small papule on her right lower leg about one month before the onset of the above symptoms.

The past history was not significant except that she had a pet cat that occasionally scratched her. She did not recall any significant infections from

these scratches. This cat had died of a sterilization operation before she was seen. The veterinarian was called and he stated that the cat was apparently well before the operation.

The examination revealed a well-developed, healthy-appearing woman in no apparent distress. The oral temperature was 99.8 degrees F. Nothing abnormal was noted except for enlargement of the right inguinal glands. These measured 5 x 6 centimeters; they were irregular, firm, and moderately tender. There were several small, discrete glands, palpable just above the large mass. There was a dark red papule, 6 millimeters in diameter, on the right lower leg. There were no scratches.

Hospitalization was advised. The admission blood count showed 14.4 grams of hemoglobin with a 9,400 white count. The blood smear was normal, the polys 62%, the lymphs 35%, the monos 2%, and eosins 1%. The urinalysis was normal, blood serology negative, and all agglutinations negative. The next day the patient complained of headache, leg pains, and nausea. Enlargement of the right cervical glands was noted, but there was no stiffness of the neck or Kernig.

On this day, January 12, 1954, .1 cubic centimeter of antigen, prepared from the first case (O.M.) was injected intradermally. A control (patient with tuberculosis) was also injected. Forty-eight hours later the test was positive. The control showed no reaction whatsoever.

The oral temperature fluctuated between 99.8 and 101 degrees F. for one week; it became normal January 15, 1954. The blood count was normal and repeat agglutinations negative. A tuberculin test was negative.

As in the first patient, only symptomatic treatment and local heat were used. She left the hospital January 17, 1954, feeling well; however, the right inguinal glands were still enlarged, 3 x 4 centimeters, but not tender.

Five days later, January 22, 1954, the patient returned to the office complaining that the glands were sore, seemed larger, and that walking caused pain. The glands were no larger and not fluctuant, but were tender. Her oral temperature was 99.6 degrees F. At this time she was started on Erythromycin, 200 milligrams, every six hours for twelve doses. Her symptoms and fever promptly subsided in two days. Since then she has remained well, and, although the glands are still slightly enlarged, they are not tender. She has refused to have them removed

or biopsied.

Because veterinarians apparently do not recognize this disease in animals, we had hoped to have completed some intradermal tests on local cats and dogs before making this presentation. Three veterinarians were questioned; only one stated that he had noted a regional adenopathy with suppuration in dogs that had been bitten or scratched by cats. The infection was usually benign, healing uneventfully on incision and drainage.\*\*

In the differential diagnosis of this disease one should include tularemia, bacterial lymph-adenitis, lymphogranuloma, venereum, tuberculosis, Hodgkin's rat-bite fever, infectious mononucleosis, leukemia, Brucella, carcinoma, sarcoma, fungus infections, and thrombophlebitis.

#### SUMMARY

Two cases of cat-scratch disease, or non-bacterial regional lymphadenitis, have been described. Both reacted positively to antigen prepared from suppurating glands of the first case. Controls showed a negative reaction to this antigen. The second case did not progress to suppuration. The use of Erythromycin may have influenced this. The symptoms and clinical course of these patients paralleled those of cases previously reported. The diagnosis in the first case was obscured by multiple surgery and the co-existence of a serious disease. Obviously the second case was not too difficult a diagnostic problem.

#### BIBLIOGRAPHY

1. Records of Riverside Hospital, Newport News, Va. Case 1, number 130537, and Case 2, number 131865, 1953-1954.
2. Debre, R. M., and Associates: *La Maladie des griffes de chat*, Bull. et mem. Soc. Med. de Hop. de Paris, **66**:76-79, 1950.
3. Editorial, J.A.M.A., **152**:1717, 1953.
4. Greer, W.E.R., and Keefer, C. S.: Cat Scratch Fever, *New England J. Med.*, **244**:545-548, 1951.
5. Mollaret, P., Reilley, J. O., Bastin, R., and Tournier, P.: *La decouverte du virus de la lymphoreticulose benigne d'inovulation*, *Presse Med.*, **50**:697-701, 1951.
6. Daniels, W. B., and MacMurray, F. G.: *Ann. Int. Med.*, **37**:697-714, 1952.
7. Rosenblum, H.: Cat Scratch Disease, *Am. Practitioner*, **4**:431-437, 1953.

#### 303 Medical Arts Building.

\*\*Since this paper was presented, Dr. R. J. Foley, a local veterinarian, has tested thirty cats with the antigen which was prepared from case one. He found no positive reactors. Dr. Foley stated that the best location for the intradermal test was in the inner surface of the pinna of the cat's ear.



## REHABILITATION OF THE DIABETIC PATIENT\*

WILLIAM R. JORDAN, M.D.,  
Richmond, Virginia

Webster's Dictionary defines rehabilitate as follows: "to restore a person to a status of independent earning power through a course of instruction under state supervision, especially along vocational lines." The rehabilitation of a diabetic person, therefore, implies that diabetes disables a person. To a limited extent only is this true. Diabetes is an acute as well as a chronic disease. It can make a person intensely sick in a period of days and thus disable him. It can do the same over a period of years. This is true of the uncontrolled disease. Control of the disease can be attained within days. The acute disability then promptly ceases. Control can be maintained adequately throughout life. Thus chronic disability does not develop. The foregoing statements hold true for the vast majority of diabetics. They may be true for all diabetics even with our present weapons of treatment. They have not always been true in the past. Many of us have felt that control of the disease sufficient to produce apparent health and a sense of well being was adequate. The relatively large numbers of child diabetics now dying at about the age of thirty after twenty years of diabetes disproves this. Last month two of my more recent patients died at the ages of twenty-nine and thirty-one years. Each was blind with retinitis. Each was twitching and having uremic convulsions. Each had been disabled for months before death. Their treatment had been obviously inadequate. In contrast at the same time, I had in the hospital a man forty years old who has worked daily. He has had diabetes since he was two and one-half years old—six years of starvation diet before insulin was discovered. His treatment has been more effective. Yet the presence of retinitis, absent tendon jerks and decreased vibratory sensation indicates that his treatment should be improved. We need to be more diligent in emphasizing the value of really adequate treatment to protect the future of the diabetic person and less prone to consider only the immediate health and convenience of the patient. The strict adherence to a liberal diet such as now prescribed and the taking of two or even three injections of insulin a

day is not too great a burden if the alternative means blindness, convulsions and death at the age of thirty years. These things relate to the scientific phase of disability from diabetes.

Another phase has to do with the attitude of the physician and the patient and family. Some people have a pessimistic attitude about the disease and some a fatalistic one. More than one diabetic has been handled as if he were not able to work. I have known children to be taken out of school permanently and men not allowed to continue their work. This disability is psychic and not physical, artificial, and wrong and difficult of correction if long continued. The State of Virginia acknowledges disability of diabetic origin and pays public money to people with diabetes who acknowledge no disability. The federal government has done the same. One patient of mine, a robust young man, handled a large bulldozer for over twelve hours daily and complained because the government reduced his disability to a 50% status. At least two others drew payments for going to college, and in these cases there was no disability or financial need, the families being well to do. One recent case has become a real problem. He has been maintained financially by the state. Now the state has found him a job in an oyster house and withdrawn financial support. The boy and his mother are outraged. She has talked so much about the difficult job obtained for this poor disabled young man that she is now convinced that it is too hard even for her, and she has quit work there, leaving two persons and not one in need of assistance. One can hardly doubt that the cause of the disability is the state's original attitude that diabetes *per se* disables a person.

There is no dissent about disability being produced by other diseases or complications involving a diabetic. One of my diabetic patients was given medical retirement by the city. I am sure the disability was due to stupidity and not diabetes. Blindness from retinitis is certainly considerably disabling, but blindness from cataract is nearly always amenable to treatment and should be handled differently, although that is not always the case. One patient has managed to secure state aid on a permanent disa-

\*Presented as a part of symposium on rehabilitation at annual meeting of The Medical Society of Virginia, Roanoke, October, 1953.

bility basis for such blindness.

Last June I attended a panel discussion at the meeting of the American Diabetes Association. It was one of the most interesting I have ever heard. All panel members were doctors who are members of the association. All had diabetes.

The Chairman had had diabetes only four years. The five other members had had diabetes for a total of over one hundred and twenty-five years, an average of twenty-seven years of diabetes per person.

One was impressed by the apparent good health of all and by their attitude. All seemed to resent the sympathy at times extended to them. Resentment against the idea that they were sick or even suffering from a *disease* was obvious. They recounted experiences among their own patients in line with this. They stated that they had a "condition", not a "disease", that required them to follow certain rules not applicable to all people, but that they did not feel like diseased or unhealthy people. Apparently they

had not been disabled by diabetes. One was the president of the association and nearly all were outstanding physicians of the United States.

Such an attitude is a healthful one for us to assume. We can bring the condition under control and immediately overcome the acute disability. We believe we can keep the condition controlled permanently and thus prevent permanent disability. Discounting the complications of diabetes, I have never seen diabetes *per se* produce permanent disability requiring rehabilitation. What we need is good medical care and not rehabilitation for the diabetic in the vast majority of cases. Rarely we need to rehabilitate the patient's, relative's, or even the doctor's attitude toward diabetes and what it means. If these things are done, disability from diabetes as considered in this symposium will not occur.

1631 Monument Avenue.

---

### Migraine Headaches.

Persons whose parents both suffered from migraine may have about a 70 per cent chance of getting the headaches too.

Physicians, as far back as 1873, have theorized that this kind of headache runs in families. Three New York researchers now have made a study which they said supports the theory that the malady is inherited. If both parents have headaches, the trait may show up in about 70 per cent of their children. If only one parent suffers headaches, the percentage drops to about 17.

The study was described by Helen Goodell, B.S.; Richard Lewontin, Ph.D., and Harold G. Wolff, M.D., of Columbia and Cornell Universities, in the September Archives of Neurology and Psychiatry, published by the American Medical Association.

They studied the "family pedigree"—information about relatives—of 119 persons having migraine, and found 343 persons who suffered headaches. Twenty of the patients had no relatives with migraine; 66 had one to three; 22 had from 4 to 7, and 11 patients had from 8 to 19 relatives with migraine. In fam-

ilies where migraine occurred, there were 832 children. Among 265 of them having neither parent with migraine, 76, or 28.6 per cent, had headaches; of 502 having one parent with migraine, 222, or 44.2 per cent, had migraine; and of the 65 persons both of whose parents were affected, 45, or 69.2 per cent, had migraine headaches.

Incidence of migraine in the general population has been estimated at between five and 22 per cent. However, "complaint of pain in the head from a variety of causes can be elicited from about 85 per cent of the population." Migraine headache follows a general pattern, usually beginning with pain on only one side of the head which may become general later. Attacks may last from less than an hour to several days, and are associated with loss of appetite, nausea, vomiting, seeing difficulty and mood changes, and sometimes with paleness, sweating, chills and dizziness.

The New York researchers commented that they assume migraine is inherited, but that the trait might show up in one environment and not another. Just hearing both parents mention attacks of migraine could influence migraine in a child.

## FACILITATING MEDICAL SERVICE

JOHN G. GRAZIANI, M.D.,  
Farmville, Virginia

I am going to be brief, to the point, and I hope stimulate a sufficient number of controversial issues and questions in your minds as to make the discussion that follows this meeting interesting, worthwhile, and beneficial to rural health and medical care.

My topic is the facilitating of medical service. For the purpose of this talk I am going to define medical service as the care we require from the physician when we are sick. Several steps are involved in this problem of medical care. First of all is the recognition on the part of the patient or his family that illness exists, and that the illness is of sufficient severity to require the services of a physician. The second part of the problem is that of getting the message to the physician. The third part consists of getting the patient and doctor together for the purpose of treatment. Hand in hand with these factors is the type of illness involved. Illness may be acute and strike "like a bolt from the blue", or it may be chronic and lingering. Lastly, illness may be an emergency.

Now, why is medical service a problem? What are the sources of irritation and dissatisfaction that make a topic such as this necessary for discussion? To begin with, we have the advent of younger physicians to rural areas in response to the need of those areas for better distribution of physicians. Very often the younger physician has not been brought up in a rural community, and brings with him an ignorance of rural people, their ways, their mode of living, as well as an ignorance of the geography of the locality in which he has settled. He's brand new to everything. With it all he brings a desire to do good work, to serve the community well, and to earn a good living. He hopes to do a modern type of practice with diagnostic facilities that are reasonably adequate. He also has a desire for some time to himself for health, study, and recreation.

Another factor in the problem of medical care is the so-called disappearance of the "old family doctor". Actually the old family doctor hasn't disappeared, for the younger physician is just as dedicated to the service of his community as the old family doctor ever was. But what has tended to

disappear is the emotional bond between physician and patient. And this disappearance of emotional attachment has come about largely because of the advances in specific therapy for diseases. I refer to the antibiotics such as penicillin, aureomycin, etc. For example: Before the war there was little in the way of specific therapy that could be done for the patient with pneumonia, and it was not unusual for the physician to "sit with" the patient, especially between the ninth and eleventh days. During this time he did little except supervise nursing care and keep visitors away. His presence *was* needed during the critical period or the crisis when the temperature dropped suddenly. However, he brought an immeasurable amount of comfort and reassurance to both family and patient by his presence alone. As long as he was there, the patient felt that things were bound to be all right. By contrast, in the present treatment of pneumonia, it almost makes little difference who makes the diagnosis or who sits with the patient. A few injections of penicillin and the patient is well. All that is left to the patient is the sting of the penicillin needle. No emotional bond has been built up; little to no knowledge of patient and physician as personalities has been exchanged. And what's the result? When the patient again calls the physician because of illness, each of them is pretty much a stranger all over again.

An additional factor in the problem of adequate medical care is the fact that with better transportation and road facilities rural people themselves "shop around" for the commodity the physician sells—namely medical service. And—being human—the physician's feelings are often hurt at being by passed for the town or city physician in the treatment of something he feels he could very easily have handled himself.

Then there are certain fixed habits of rural people I find it almost impossible to change. One of them is their attempts at self-medication with home remedies or left over medicines borrowed from their neighbors. The illnesses may or may not be similar, and they persist in the medication for a period long past the time they should have called a physician. Another fixed habit is the matter of office

\*Read at Institute of Rural Affairs, V.P.I., Blacksburg, Va., July 28, 1954.



hours. Office hours mean little. It's not unusual for a physician to have little or nothing to do during his afternoon office hours, go out and make a call just before supper, and come back to find the cars lined up in front of his home with patients who should have been there hours before. If the physician is not in his office they go to his home, or his church, or to his place of recreation and there expect immediate attention. They tend to disregard his time off.

The solution, of course, lies in the education of both physician and patient in the responsibilities of each towards the other. I have a few rules of thumb which I have found helpful in instructing the patient, and which my patients now follow fairly well.

The first rule is that if you have a fever in the morning, rest assured that you'll have a much higher fever by that afternoon or that night. The same applies to children—only more so. You will need the services of a physician. A fever accompanied by a definite chill and not just chilliness always will need a physician. Pain in the abdomen that lasts for any length of time needs a physician. A second rule is that in talking to the physician or his secretary let him know the temperature, the length of time the patient has been sick, and what seems to be the patient's complaints. Don't just say, "Make a call. . . ." In our own community the Red Cross Home Nursing Course has been a great help in the reports made to the doctors by the mothers. The mothers have learned a great deal of what to look for and what to tell the doctors in transmitting a message for a house call. And all of this helps the doctor evaluate the situation. A third rule I teach is that the acutely ill patient may safely be moved to the doctor's office without altering unfavorably the course of his illness. The patient is not going to be any worse for going to the office. This is so because of the newer drugs. Lastly, I try to explain and define an emergency. An emergency is an unexpected and an unforeseen combination of circumstances which immediately threatens the patient's life, and for which treatment to save life has to be rendered as soon as possible. But the decision that an emergency exists rests with the doctor, not with the patient's family or with the desires of the family simply to have a doctor.

Now that we have come as far as recognizing that

a patient is ill and needs a doctor, that the message has been adequately transmitted to the physician, how can we facilitate the physician's call to the farm? Firstly, the patient's name should be given correctly. I have found to my sorrow, on a rainy night, that Willie Gray and William Gray lived five miles apart in opposite directions. Another one of my experiences was to find out too late that George Gates and George Yates lived thirteen miles apart. So the names are important. Then the directions should be exact. It's astonishing to find out how few people know how to give exact directions to their homes, and how few know the numbers of the roads on which they live. A further help in accurate directions is to have the mail box with the name on it on both sides of the mail box—and easily legible. Another thing to remember is that landmarks easily visible in the daytime are not all visible at night by automobile headlights, so that the remark "You can see the house from the road, Doc" simply is not true. (A famous last word to my secretary is, "He just can't miss it". I do, almost regularly). Lastly, have the approach road—the road leading to the house from the main road—in as good condition as possible. One of the most hazardous parts of making a call in bad weather is usually the first six feet of junction of the hard surface with the dirt road. The area is usually a hole and after a good rain is nothing but mud. A few good sized rocks at well chosen points would prevent getting stuck. But the rocks just aren't there.

Now I feel that all I have said is only common sense. But the reason that the subject has to be stressed is that common sense is not a common attribute. We all don't have it at times, and we lack it singularly when it concerns illness. My statements concerning medical care are based not only on personal experiences, but on the complaints that have come back from young doctors newly placed in rural areas. So it is in the hope of facilitating better relationship in obtaining the services of physicians when we are sick that I speak today. And, of course, I'd like to prolong the doctor's life a little, too.

So, in closing, I would like to have the following points stressed to rural people in need of a doctor's services: (1) Make up your mind early as to whether someone ill in your family is going to need a physician. ((2) Know your doctor's office hours

and time off. (3) Give as accurate a description as possible of the illness. (4) Follow the doctor's advice as to whether the patient should be brought to the doctor's office. (5) Give accurate and explicit road directions. (6) Have the approach road in reasonably passable condition. I'm sure that if these suggestions are followed that a good deal of the

irritation and ill-feeling that we read and hear about nowadays concerning medical care would be abolished. The whole problem involves continued sympathetic understanding and cooperation between the physicians and the public.

*140-A Main Street.*

---

### Care for Uninsurables.

The responsibility for financing the cost of illness for low-income and uninsurable persons is a local and state concern. Dr. Walter B. Martin, Norfolk, Va., president of the American Medical Association, said recently.

In the August 28 Journal of the A.M.A., Dr. Martin said health care costs for the non-insurable must be met by local and state aid and philanthropic funds. To lower the amount of aid needed, he proposed two methods: further expansion of sound voluntary insurance plans, and more chronically ill and convalescent hospitals to provide for these persons at lower per diem cost. The problem must be met at this level since there can be "no acceptable or realistic standard for federal aid." Federal government participation would be "difficult to carry out without a degree of federal supervision and control that would be highly objectionable. . . . The medical needs of a person will vary with the duration and severity of his illness or disability and his immediate necessity could not be measured by any national yardstick."

Dr. Martin said pressure would be exerted to lengthen this yardstick until each year more persons

would claim government assistance. Opposition to federal aid "in no way solves the problem of providing for the health care of the uninsurable nor lessens the responsibility for working out a realistic and effective means of financing the necessary care for these persons."

This uninsurable group now includes many of the 13,500,000 persons over 65, the subsistence-income groups, many chronically ill, and the more than 5,000,000 recipients of direct governmental assistance. The number of persons in these categories could be reduced to some extent from the present total of 30 to 35 million by insurance coverage for those able to buy it but not able to pay for an illness when it occurs, he said. The responsibility for those who remain uninsurable rests at the local level.

"Only at the local level can the medical needs of individuals be determined. Only at the local level can their economic status be assessed in relation to their medical requirements at a particular time."

Dr. Martin called for a "joining of forces" between state medical societies and hospitals in promoting sound voluntary insurance plans and providing "the means of financing the care of the uninsurable . . . at the state and local level."

## MESENTERIC CYSTS\*

E. M. CHITWOOD, JR., M.D.,  
 GEORGE W. KELLY, JR., M.D.,  
 and  
 W. W. WALTON, M.D.  
 Pulaski, Virginia

This entity was first recorded by Benevieni of Florence in 1507.<sup>1</sup> Loeb estimated that some 550 to 600 cases had been reported by 1942<sup>2</sup>. The true rarity of this lesion can be seen when the figures of Judd and Crisp are examined, as they noted an incidence of less than one per 100,000 admissions at the Mayo Clinic.<sup>3</sup>

The present case is being reported because of its rarity and in order to illustrate the difficulty of recognizing the causes of acute pain in the abdomen.

### CASE REPORT

A nine year old white female was referred to this hospital with a diagnosis of acute appendicitis. The child had been in the usual state of good health until some twenty hours prior to admission, at which time there was a sudden onset of low abdominal pain which had persisted. There was a normal bowel movement the day prior to admission. There was nausea and vomiting but no urinary symptoms.

Past medical history and review of symptoms were not remarkable. Physical examination revealed a healthy young white female in acute distress. Her temperature was 100.4, rectally; respiration 18, and the pulse 90. The tonsils were enlarged but not infected. There was tenderness in the right para-umbilical region without spasm. A rectal examination elicited tenderness high on the right. Admission urinalysis was not remarkable and the red count was 4.4; hemoglobin 96%, and the white count was 10,000 with 81% neutrophils and 19 small lymphs. A diagnosis of acute appendicitis was made and operation advised.

\*Surgical Service, Pulaski Hospital, Inc.

A grossly normal appendix was removed and exploration revealed a large, grayish-white cystic mass in the pelvis. This measured approximately 15 cms. in greatest diameter and was thought to be a lipoma. It was delivered into the wound with some difficulty, and it was then obvious that it arose from the mesentery of the jejunum about three feet below the ligament of Trietz. The mass was dissected free by blunt and sharp dissection and it was noted that the blood supply of the bowel in this area was impaired. A resection of the small bowel was done with a side to side anastomosis. Several smaller lipomas were noted in the mesentery to the sigmoid but were not removed as the patient was doing poorly on the table.

Post-operatively, she was treated with Wangenstein suction, intravenous fluids and on this regimen did quite well. The post-operative course was uneventful and she was discharged on her 10th hospital day.

The pathology report was "Congenital mesenteric cyst."

The patient was asymptomatic three months after operation.

### BIBLIOGRAPHY

1. Costello, R. C.: Chylous Mesenteric Cyst—Report of Case, Ohio State M. J., **38**: 543-545, June, 1942.
2. Loeb, M. J.: Mesenteric Cysts; Review of Literature, Genesis and Classification—Report of Case, New York State J. Med., **41**: 1564-1569, Aug. 1, 1951.
3. Judd, E. S., and Crisp, N. W.: Primary Tumors of Mesentery, Proc. Staff Meet., Mayo Clinic, **7**: 555, Sept. 21, 1932.

## ANNUAL PUBLIC RELATIONS CONFERENCE

The Medical Society of Virginia—November 18, 1954—2:00 P.M.

Charlottesville—Hotel Monticello

*Make sure your Society is represented!*



CLINICOPATHOLOGICAL CONFERENCES  
of  
The Medical College of Virginia Hospital

Prepared and Edited by  
GORDON HENNIGAR, M.D.\*  
WM. R. KAY, M.D.\*\*

CASE #101

A 46 year old colored male was admitted to St. Philip Hospital on June 29. He had apparently been well until twenty days previously when he suddenly developed pain and swelling of his left great toe. He was seen by his local physician, who found his temperature to be 104°. The toe was x-rayed and the patient was then given large white tablets and over the next few days the pain and fever apparently gradually subsided.

Twelve days before admission the patient began to develop shortness of breath and paroxysmal nocturnal dyspnea. He became unable to lie prone. He denied any swelling, but complained of a tightness and fullness in his chest accompanied by dry hacking cough. He was given digitalis by his local physician and some pills to help his breathing, but he apparently did not improve. He became quite weak and stated that he had lost 8 pounds. He was unaware of fever during the few days before admission, but described continuous drenching sweats day and night.

He had had one previous hospital admission in 1947 because of abdominal pain with diarrhea and fever of short duration. No definite diagnosis was reached, but the impression was that he either had an acute pancreatitis or possibly mesenteric adenitis. The heart was described as normal at that time, and the only recorded blood pressure was 160/90. The liver was found to be enlarged 2 fingers breadth below the costal margin. His symptoms subsided on conservative treatment and he was discharged after a week of hospitalization. He had apparently remained well since that time. Past history was otherwise essentially negative.

Physical Examination: Temperature 98. Pulse 108. Respiration 20. Blood pressure 170/0. Patient was well developed and well nourished, but markedly dyspneic and orthopneic and appeared rather acutely ill. The fundi were negative. There was moderate distention of the neck veins. There

were a few fine rales in both lung bases, but the lungs were otherwise clear. The heart was greatly enlarged with a diffuse apical impulse with the left border in the 6th intercostal space at the anterior axillary line. The rhythm was regular. There was a to-and-fro murmur along the left sternal border and at the apex. The abdomen was distended. The liver was enlarged and tender, extending 4 or 5 fingers breadth below the costal margin. There was slight residual swelling around the 1st left metatarsophalangeal joint, but there was no joint tenderness, redness, or local heat. The extremities were otherwise negative.

Laboratory Data: Hemoglobin 12.6 grams, WBC 11,600, 70% polys., 27% lymphs., and 3% monos. Urine examination was not reported. Fluoroscopic examination of the chest was reported as showing cardiac enlargement, chiefly left ventricular, with moderate pulmonary congestion and pleural effusion on the right. An x-ray of the left foot showed only some soft tissue swelling around the great toe.

The patient went steadily downhill. The day following admission his temperature rose to 99.8 and the attending physician described the patient as being extremely dyspneic and apprehensive with physical signs of pleural effusion in the right base, and with pale mucous membranes. The patient was continued on digitalis, given oxygen and one 500 cc. whole blood transfusion. He became progressively more dyspneic and died at 5:20 A.M. on the morning of July 1st. An autopsy was obtained.

CLINICAL DISCUSSION BY DR. KINLOCH NELSON\*

Here we have a 46 year old colored male, who entered the hospital on June 29th. I presume this was 1952, which is of little significance other than that his previous admission was in 1947 and hence we assume that he had been in good health for five years up to the onset of his present illness, which began twenty days previously with the sudden development of pain and swelling of his left great toe and a recorded temperature of 104. This onset is

\*Associate Professor of Pathology, Medical College of Virginia.

\*\*Assistant Professor of Clinical Medicine, Medical College of Virginia.

\*Professor of Clinical Medicine, Medical College of Virginia.

not very helpful diagnostically, but its suddenness suggests some vascular disturbance or embolism, which fits well with his later course. It crossed my mind that this might be a manifestation of gout, which can be dismissed by reason of later developments, particularly the x-ray which was negative for joint involvement, and I also thought of osteomyelitis, which can be omitted from further discussion for the same reason, although, as you know, in its very early stage the x-rays may be negative.

Twelve days before admission the patient began to develop congestive heart failure manifested by dyspnea, orthopnea, and paroxysmal nocturnal dyspnea. This latter symptom has always seemed to be one of the few practically diagnostic symptoms, being always indicative of disease of the coronary arteries, either at their openings in the sinuses of Valsalva as in aortic syphilis, or throughout their course in the heart muscle, as in coronary sclerosis; or this symptom may be a manifestation of bronchial asthma. Some years ago Dr. Swineford at the University of Virginia undertook to show that this symptom was even more closely related to allergic states in that those patients with coronary disease who showed this symptom also had historical or other evidence of allergic states, whereas it was an uncommon finding in patients with similar heart disease without accompanying history of allergic upsets. Whether or not this idea is factual, I do not know. This particular patient may be the exception that proves the rule, because I cannot conclude that there was any real coronary disease *per se* in this case. There was no edema in the development of this rather acute heart failure, and hence it was chiefly of the left ventricular type, that is the predominant strain was on the left ventricle, which idea is substantiated by later developments. The chest symptoms are compatible with pulmonary congestion and not helpful diagnostically. The absence of response to digitalis, providing that the dosage was adequate, may well have considerable significance; it is very unusual for a patient with any ordinary heart disease, luetic, arteriosclerotic, or rheumatic, not to get some benefit from digitalization, especially in their first break in compensation; thus we may expect to find some unusual or active process responsible for the heart failure. The weakness, possible weight loss, and sweats, despite the absence of known temperature elevation, are compatible with infection and since we have no leads as to possible localized infection, we

think of sepsis. Although there have been some reports of exhaustion and weakness as symptoms of cardiac failure, such has not been our experience; certainly it would not be customary for a patient with heart failure to *lose* weight, although we have little confidence in the history of weight change. The sweating must mean infection and since time immemorial has been associated in our minds with pulmonary tuberculosis, especially if such sweating occurs at night. As a matter of fact, tuberculosis is usually discovered now so early by other methods that this symptom has little value in the diagnosis of this disease.

The diagnoses of pancreatitis and mesenteric adenitis suggested for the abdominal pain, fever, and diarrhea in 1947 seem to have little foundation. We have never cared for the diagnosis of mesenteric adenitis as we do not see how this can be reached without laparotomy. The normal heart and blood pressure of 160/90 recorded at that time appear to be of great importance in tending to rule out a rheumatic aortic valve lesion possibly suggested by the later course. It would be highly unlikely for a man of this age to have rheumatic aortic valve disease in 1952 and a normal heart in 1947. Also, for what it may be worth in this patient, there was no history of rheumatic fever, chorea, etc. I see no connection between the enlargement of the liver found in 1947 and the fundamental problem here. It may be that this patient was one who had a palpable liver without disease, as we see from time to time. We note the absence of any serological test for syphilis.

The physical examination showed no fever, a somewhat, though not excessively, rapid pulse, and slightly elevated respiratory rate. The blood pressure of 170/0 is a striking finding. We have only rarely seen a truly zero diastolic pressure, as in most cases careful observation will show a change in sound at a very low level, such as 20-30. In any case, such a finding is only possible when there is a leak in the arterial peripheral circulation during diastole, that is outside the heart itself or the lungs. Such an occurrence is commonest in aortic regurgitation, arteriovenous fistula, and rupture of the aorta into the pulmonary artery, the clinical findings of which were so well described by Dr. W. B. Porter some years ago.\*

\*Porter, William B.: The Syndrome of Rupture of an Aortic Aneurysm into the Pulmonary Artery, *Am. Heart J.*, **23**, No. 4, p. 468-482, April, 1942.

The generally ill and breathless appearance of the patient is compatible with his rapidly developing and progressive congestive failure and not particularly so with a recorded respiratory rate of 20. No petechiae were noted in the fundi. The distended neck veins and basal rales fit the cardiac failure. The idea of greatly enlarged heart with border in the 6th space in the anterior axillary line seems to have been arrived at by percussion. We have had little success with percussion of the heart, and have seen many observers miss its size considerably by this method. Consequently, we have given up this procedure and rely largely on the location of the apex in helping to determine heart size. Our greatest reliance, however, is on that really great percussor, the roentgen ray, whose chief mission is to demonstrate differences in density, which is what we are trying to do by percussion. In this case the x-ray bears out the clinical idea of greatly enlarged heart, chiefly the left ventricle, and showed pulmonary congestion plus right pleural effusion, which was not recorded in the physical examination, another "tribute" to percussion. A word might be said about this right pleural effusion as it has long been known that in cardiac failure effusion, when present, is practically always on the right for reasons unknown. So much is this the case that the occurrence of left pleural effusion in a patient with obvious cardiac failure should make us think of the possibility of some other concurrent disease of the lung or pleura on the left, or some abnormality such as fusion of the pleural space on the right. The to-and-fro murmur along the left sternal border and at the apex is somewhat worrisome because we have so far felt that aortic regurgitation was the most likely cause of the blood pressure disturbance, and we have considered relatively acute disease of the aortic valve as a very likely possibility. In such circumstances we would like to hear the murmur over the aortic area as well as along the left sternal border and at the apex. It would be of some value also to know the general loudness and quality of these murmurs.

The significance, if any, of the distended abdomen escapes me. There is no mention of the spleen. The liver findings go with the heart failure. The great toe findings indicate resolving soft tissue inflammation.

In the laboratory the patient was not especially anemic and the white blood count is but little elevated with a relatively normal differential. No urine

was available and again we have no serological test for syphilis. The x-ray of the foot bore out the idea of subsiding soft tissue inflammation. There is a notable absence of blood cultures or reports of same.

The hospital course was extremely rapid downhill and brief with death on the second hospital day. The reasons for the transfusion are not clear, as we would not ordinarily transfuse a patient in congestive failure with a hemoglobin of 12.6 grams. Perhaps he went into more or less of a state of shock terminally. The fact that his temperature did not exceed 99.8 is noted, and is of considerable significance if recorded by rectum; obviously mouth temperature in such a patient would be valueless.

To sum up—we have a middle-aged colored man who died with congestive heart failure, symptoms of which existed for only fourteen days. The suggestions of sepsis without fever or material leukocytosis are compatible with severe infection. The cardiac findings indicate that the locus of the infection was the aortic valve and the evidence of embolism to the toe is further evidence of valvular disease.

All evidence then leads to the diagnosis of acute bacterial endocarditis of the aortic valve with death from overwhelming sepsis and rapidly progressive congestive heart failure, with vegetations blocking the coronary ostia as basis for the paroxysmal nocturnal dyspnea.

DR. NELSON'S DIAGNOSIS: Acute bacterial endocarditis involving the aortic valve.

CLINICAL DIAGNOSIS: Acute bacterial endocarditis.

ANATOMICAL DIAGNOSIS: Acute bacterial endocarditis of aortic valve with perforation of the right anterior and posterior valve cusps.

#### PATHOLOGICAL DISCUSSION BY

DR. GORDON HENNIGAR

The body was that of a well developed and well nourished middle aged color male. The right pleural cavity contained 500 cc. and the left pleural cavity contained 1200 cc. of serous fluid. There was 60 cc. of serous fluid in the pericardial sac.

The heart weighed 575 grams and was hypertrophied and dilated. There were brown vegetations on the posterior and right anterior aortic cusp. A 1.4 x 0.4 cm. opening was found in the posterior aortic cusp, and in the right aortic cusp there was a 0.5 cm. perforation. The remainder of the valve cusps were delicate and the attachments and commissures were normal. There was no rheumatic stigmata



in any portion of the heart. Microscopically the vegetations were composed of fibrin and large histiocytes. No bacterial colonies were seen. At the base of the valve are areas of acute inflammation and necrosis infiltrated with polymorphonuclear leukocytes. A post mortem culture of the vegetation revealed the presence of alpha hemolytic streptococcus (*streptococcus viridans*) and a post mortem culture of the heart blood was sterile.

The lungs were congested and contained areas of atelectasis. The liver was enlarged and on section showed fatty infiltration and moderate portal cirrhosis. The spleen was congested. No infarction or embolic phenomena were noted in the kidneys. The brain was not examined.

This case shows features of both acute and sub-

acute bacterial endocarditis. The rapid course, large vegetations, early destruction of valve cusps, lack of embolic phenomena, and abscess formation in the myocardium suggest acute bacterial endocarditis. On the other hand the histologic appearance of the aortic valve, the lack of bacterial colonies on microscopic section, and the demonstration of alpha hemolytic streptococcus (*streptococcus viridans*) point to the subacute form of bacterial endocarditis. At any rate, it is felt that this patient developed a bacterial endocarditis on the aortic valve due to the alpha hemolytic streptococcus (*streptococcus viridans*), that he developed early in the course of this disease a perforation of the aortic valve with resultant aortic insufficiency, and that this severe aortic insufficiency led to his early death from congestive heart failure.

---

### Emotional First Aid Needed.

You don't have to be a psychologist to give needed first aid to "emotional casualties" of a community disaster such as a flood, fire or tornado. Knowledge of a few basic rules is all that's necessary to give first aid to a physically injured disaster victim. The same is true of persons who react badly to the emotional shock of a disaster, according to the Committee on Civil Defense of the American Psychiatric Association. Its material on psychological first aid, prepared for use in enemy attack but also helpful in natural disasters, appears in the September 4th Journal of the American Medical Association.

The first need is to understand and control your own emotions and to know your abilities and limitations, so you will be in a position to help others. Then you must "accept every person's right to have his own feelings," however strange they may seem. Your job is to help the victim cope with his feelings, not to tell him how he should feel. A casualty's emotional limitations are as real as physical ones. They must be taken into consideration, but his potentialities also must be sized up and given a chance to work.

"Unlike ordinary life, a disaster engenders more urgent jobs than there are people to do them. Opportunities to regain self respect and self-confidence are correspondingly greater." "Psychological first aid can help many emotionally disturbed victims to take advantage of these opportunities and thereby get back into their stride."

Here are the major kinds of emotional reactions

and ways to deal with them: 1. Normal: Most people show some "signs of disturbance" which are only natural. A word of encouragement in passing is worth while. 2. Individual panic: Some lose control and rush pointlessly about, and a few such persons may set off dangerous mass panic. Gentle firmness should be tried first, then firm but not brutal physical restraint. The committee debunked "the widespread belief that a casualty in panic can be jolted out of his confusion by slapping him in the face, by dousing him with cold water, or by other forms of abuse." 3. Depressed: Some persons seem to be numbered, to lose contact with the world. A few minutes talking with them, showing a real personal interest, and suggesting simple tasks to bring them back to reality will help. 4. Overly active: The man who suddenly "takes over," issues orders, and rushes from job to job without organization can hamper those who are more reliable. Giving this man a heavy job to work off physical energy, and getting him under proper supervision will help calm him. 5. Bodily reactions: An emotionally upset person "unconsciously may convert his great anxiety into a strong belief that some part of his body has ceased to function." He must be treated with consideration for his disability, made to feel you are interested, and given small jobs so he can regain composure gradually while awaiting medical help.

The material was prepared by Drs. Calvin S. Drayer, Philadelphia; Dale C. Cameron, Washington; Walter D. Woodward, New York City, and Albert J. Glass, U. S. Army.

PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.  
*State Health Commissioner of Virginia*

Some Observations on Poliomyelitis in Virginia, 1954

TABLE I REPORTED CASES OF POLIOMYELITIS, VIRGINIA JANUARY THROUGH SEPTEMBER, 1953 - 1954											
	Jan.	Feb.	Mch.	Apr.	May	June	July	Aug.	Sept.	Total	
1953	5		3	3	9	17	156	262	139	594	
1954	3	4	7	4	6	13	69	148	156	410	

From the above table it is seen that exactly the same number of cases—37—were reported in the first six months of 1953 and 1954. The number of cases reported in July and August of 1954 was considerably fewer than in the corresponding months of 1953. In September of this year we note an unusual occurrence in Virginia, the development of the

peak now rather than earlier. However, the total number of cases for the year is 184 below that for 1953.

It is seen that the attack rate is considerably lower this year, that males are affected more frequently than females though there is a slight increase in the percent of females attacked in 1954. The attack rate among the non-white population is still vastly lower than in the white population; however, the percent distribution is higher among the non-whites than in 1953: 1954, 11.71%; 1953, 7.40%.

The increase in the non-white group is further brought out in Table III.

It is evident that there is an increase in the para-

TABLE II  
SEX DISTRIBUTION

Year	Attack		Males	Females	%Males	%Females	White	Non-White	Attack Rate	
	Cases	Rate							White	Non-White
1953	740	21.14	443	297	59.86	40.14	689	51	25.32	6.55
1954 to date	410	11.71	232	178	56.59	43.41	367	43	13.49	5.52

TABLE III									
		Total		Paralytic		Non-Paralytic		Not Stated	
		1953	1954	1953	1954	1953	1954	1953	1954
Non-White	Male	26	22	14	15	12	7		
Non-White	Female	25	19	15	9	10	6		4

TABLE IV												
DISTRIBUTION OF PARALYZED, NON-PARALYZED AND NOT STATED CASES												
Year	Paralyzed		%Paralyzed		Non-Paralyzed		%Non-Paralyzed		Not Stated		%Not Stated	
	1953	1954	1953	1954	1953	1954	1953	1954	1953	1954	1953	1954
White	339	198	45.81	48.29	348	153	47.03	37.32	2	15	0.3	3.66
NonWhite	29	24	3.91	5.85	22	16	2.97	3.90		4	0.0	0.98
Total	368	222	49.73	54.15	370	169	50.00	41.22	2	19	0.3	4.63

TABLE V AGE DISTRIBUTION		
	1953	1954 Through Sept.
Median Age	7.40	7.34
Youngest	1 month	5 weeks
Oldest	50 years	45 years

lyzed cases in the entire population. This may represent an actual increase or it may be due to more careful examinations made at intervals to determine muscle weakness.

In 1953, 115 cases represent 15.5% of the total

TABLE VI								
POLIOMYELITIS IN OLDER AGE GROUP (20 YEARS AND ABOVE)								
	Total		Paralytic		Non-Paralytic		Not Stated	
	1953	1954	1953	1954	1953	1954	1953	1954
White Male -----	48	29	29	17	19	10		2
White Female -----	63	38	29	23	34	10		5
Non-White Male -----	2	1	2	1				
Non-White Female -----	2	1	1		1			1

740. In 1954, 69 cases are 16.8% of the total 410 cases. There are 21 cases above 30 years of age.

The use of gamma globulin as permitted by the Office of Defense Mobilization has been different this year. In 1953 it could be used only for family contacts up to 15 years of age, later advanced through 15 years in the dosage of 0.14 cc per pound of body weight. This year there has been no age limit and the average dose has been 10cc rather than 7cc. If given by cc per pound of body weight it has been computed on the basis of 0.2cc for each pound. At first it was to be given only to groups larger than a family unit and in August this was modified to include family contacts who might be in the period of incubation.

The Salk Vaccine was administered to participating second grade pupils in Loudoun, Fairfax, Henrico, Chesterfield, Norfolk, Smyth and Washington Counties and the Cities of Bristol and Richmond. In these areas gamma globulin has not been available for contacts of poliomyelitis. This action was taken at the request of the Poliomyelitis Evaluation

Center, Ann Arbor, Michigan, in order that the recipients of the Salk Vaccine might have exposure to the disease without possible interference or modification. The results of the evaluation of the Salk Vaccine will probably be known by April 1955, and it is hoped that proof will be available that paralytic poliomyelitis is prevented through its use.

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	Sept. 1954	Sept. 1953	Jan.- Sept. 1954	Jan.- Sept. 1953
Brucellosis -----	7	10	37	48
Diphtheria -----	1	7	27	63
Hepatitis -----	159	199	3105	1848
Measles -----	73	43	23451	4670
Meningococcal Infections -----	1	12	78	157
Poliomyelitis -----	156	139	410	594
Rocky Mt. Spotted Fever -----	7	6	35	56
Streptococcal Infections (Including Scarlet Fever) --	187	187	3751	4362
Tularemia -----	3	1	28	23
Typhoid Fever -----	7	7	42	41
Rabies in Animals -----	12	20	284	349

1955 Post Convention Trip to Europe.

The American Medical Association, in conjunction with United Air Lines, has arranged an attractive post-convention tour to Europe. Seven countries will be visited: France, England, Italy, Holland, Belgium, Germany, and Switzerland. Physicians and their wives can go to Europe following the annual A.M.A. Convention in Atlantic City, June 6-10.

With the A.M.A. meeting being held in Atlantic City, physicians and their wives are offered an unusual opportunity to combine a trip to the East Coast with a visit to these interesting European countries. Similar trips have been sponsored by the California Medical Association, the World Medical Association, and other groups when their meetings have been held on the coast.

The European medical tour party will leave New

York International Airport aboard special deluxe chartered airlines on Sunday, June 12. They will arrive in Paris late Monday morning, June 13.

All through the tour the party will stay at luxurious hotels in the many cities that will be visited. Motor coaches will provide interesting side tours to historic and scientific points.

Arrangements are being made for medical meetings in Paris, Rome, Lucerne, and London. Leading European scientists will lecture on topics of current interest to all physicians.

The return trip will be on Saturday, July 9, arriving in New York on the afternoon of July 10. Complete information and reservation blanks can be obtained by writing A.M.A. Post-Convention Tour c/o United Air Lines, 5959 South Cicero Avenue, Chicago 38, Ill.



NOTES\*  
ON  
PULMONARY TUBERCULOSIS

Modern Therapy (IV)

Non-Sanatorium Treatment of the Active Case (A)

Immediately following diagnosis of active pulmonary tuberculosis, a decision must be made with respect to the type of treatment to be prescribed. With extremely rare exceptions treatment of some form will always be indicated for the active case, whether for "control" or for cure.

No one can predict with certainty, at time of diagnosis, what form, or to what extent various types of treatment may eventually be required for the control or cure of *any* given case of active tuberculosis. Before the days of modern therapy patients with advanced disease were observed to recover on ambulatory treatment alone; minimal cases sometimes required as many as twenty-four hours a day flat-bed-rest *for months*, to get well. These, of course, illustrate the extremes rather than the rule.

Because of this well known wide variation in treatment needs, whatever rest schedule is prescribed for *any* case must be considered as employed upon a *trial* basis, at the beginning. While based primarily upon what experience generally has shown through the years to be necessary initially for the average patient with corresponding involvement to make satisfactory improvement, the trial schedule today for many patients will not be as rigorous as it would have been before the discovery of the new powerful medicinal adjuvants. One of the *natural* advantages to be expected to result when specific drug therapy is administered *would* be a liberalization of concurrent rest schedules. If the patient makes anticipated progress upon a given treatment regime, well and good; if he does not, the rest schedule will be intensified and appropriate adjuvants added or changed, as may be required from time to time, to keep abreast of actual treatment needs, and as these become apparent during the course of the disease.

The first consideration in treatment is whether the patient obviously is in need of a substantial amount of rest *in bed* because of clear cut medical and/or surgical indications (see Dec. 1953 issue Va. Med. Monthly). If the answer is in the affirmative, the patient should be put to bed at home until sanatorium placement can be arranged. He should be

started on conventional drug therapy almost categorically.

Home care for essentially bed-fast tuberculous patients is at best an expedient and should be condoned, in most instances, only when sanatorium placement cannot be negotiated.

Success of any serious effort to obtain the "equivalent" of institutional care outside a sanatorium is contingent upon almost literal conversion of the home into a "sanatorium". The average home does not lend itself to this. Makeshift attempts, carried out over considerable periods, usually produce second-rate results; the patient may not die (too soon) but too often he forfeits his chance to get completely and permanently well.

As in the case of criteria for application for admission to a sanatorium, eligibility of the newly diagnosed patient for non-sanatorium treatment, (irrespective of the availability of sanatorium beds) is by no mean inflexible. It is bound by no hard and fast rule. In the opinion of the Virginia State Health Department, patients chosen for non-sanatorium care would be limited largely to selected minimal, active or occasional more advanced active cases, with lesions not highly unstable by x-ray; no cavity would be roentgenologically discernible; for the most part the patients would be asymptomatic. Most would not cough or expectorate; gastric lavage cultures routinely performed to obtain laboratory confirmation of diagnosis or activity status, would show tubercle bacilli but rarely or intermittently. Thus the simplest of precautions would protect against spread of infection. By and large, such patients would *not* require isolation *at home*, or in an institution, to protect others. With few exceptions they could associate freely with fellow workers at places of employment.

The next question is what type and how much treatment should be recommended; should drug therapy be prescribed categorically? In the opinion of the Virginia State Health Department drug therapy *need not* necessarily be prescribed for each candidate for non-sanatorium care.

As intimated above, the degree i.e., the character and extent of lung involvement at time of diagnosis,

\*Prepared by the Virginia State Health Department.

and the innate capacity to resist tuberculosis, are well known to vary widely, both independently and in combination, in different individuals. An almost infinite variety of clinical patterns conceivably might result from a kaleidoscopic blending of these factors—a prediction repeatedly confirmed by experience. Clinical entities are actually observed to run virtually the entire gamut of theoretical possibilities (much as colors in a spectrum). Evenness of dispersion of these entities throughout may not be wholly comparable to merging of colors from band to band in a spectrum, but even allowing for some “bunching” here and there, the analogy, though imperfect, is far from inapropos.

Accordingly, it would appear reasonable that prescribed therapy must be tailored to match all of the correspondingly, highly individualized, broadly diversified treatment needs, if it is to offer assurance of success *at minimum cost* to the patient and his community, whether the patient is treated inside or *outside* a sanatorium. (It should be born in mind that patients in sanatoria do not adhere to a single bed-rest regime. Rest schedules vary from flat-in-bed twenty-four hours a day, to two to four hours in a workshop every day.)

In actual practice, individual needs have been found to vary all the way from those of the few, whose disease, even today, cannot be “controlled” to say nothing of cured, by any known method, to those of patients classified as “apparently inactive” (Virginia State Health Department) who require *no* treatment. To the latter group might be added many patients with active disease, usually minimal, who according to Public Health Service x-ray survey reports, appear to be *capable* (statistically) of getting well spontaneously, but who, as individuals, are indistinguishable from patients with corresponding disease who are dependent for cure upon at least a modicum of formal treatment; to be safe the spontaneously curable case *must be treated*, along with others in the same general category.

The bulk of patients with active tuberculosis lie between these extremes—among the innumerable *intermediate* bands of our clinical “spectrum”—both as regards clinical status and treatment needs.

Some with minimal disease, where the exudative component is small by x-ray and whose history suggests an above average resistance, may belong to a group where extra-curricular pursuits only, need be curtailed to varying degree (as a trial schedule).

Short term formal daily rest periods during leisure hours (in contrast to hours at work) may or may not be prescribed, as well.

Another “band” or group might conceivably be composed of those who closely resemble the above but whose over-all clinical status suggests need for more drastic or virtual elimination of extra-curricular pursuits (Saturday night poker, Thursday afternoon golf, etc.), supplemented by drug therapy from the very beginning, upon an out-patient basis.

Then one might encounter patients with definitely more advanced disease, still with comparatively little apparent exudation, no visible cavity, an initial gastric washing positive for tubercle bacilli on culture, combined with a history of but average resistance. Here drug therapy might be indicated, *almost* routinely, sanatorium care not necessarily.

Finally would come the patients in whom need for sanatorium care is clear cut—from the refractory, the predominantly exudative, or the highly unstable, or the persistently febrile minimal case with a history that may or may not be suggestive of below average resistance, to the farther advanced toxic individuals, with cavity, positive sputum, etc.

Precisely how broad a band on our tuberculosis “spectrum” should be assigned respectively to each of the few suggested examples of apparently distinct groups of active cases cited above, *and many many others*, will depend entirely upon the physician in attendance. Indeed there are some who would recognize no intermediate bands at all with respect to treatment needs, in spite of the absence of recorded major gaps in our analogue of clinical disease. These physicians would hospitalize *every* active case, of which there are estimated to be about ten thousand in Virginia, not including those already in sanatoria. This is an *easy* solution for everybody except the patient and his family and the tax-payer. No discrimination is required, but *much money* for construction of sanatorium beds might eventually have to be forthcoming to implement this type of treatment in the absence of a case finding program deliberately “frozen” to conform to existing facilities for hospitalization.

Other equally well known physicians do not seek immediate hospitalization for every newly diagnosed active case—but *do* almost invariably include, from the very beginning, drug therapy, as part—sometimes a major part—of prescribed non-sanatorium treatment, a practice which again minimizes need for

individualization. Only time will tell whether this also, is as wise as it is simple. Will *all* systemic rest and *all* drug therapy later be discontinued *simultaneously*, too? If there is a place for continued systemic rest *after* drug therapy has been discontinued, theoretically there might be a place for it to be employed as a single effective element of therapy *at the beginning* of treatment (as suggested above) as well as at the end. The subject will bear future elaboration.

Of course, when all is said and done, more important than the form of treatment initially selected or subsequently chosen for any given case, is an unwavering insistence upon the part of the attending physician, that treatment be *adequate* in every case

as proved by *results obtained* (as revealed by closely spaced discriminating clinical evaluation including x-ray.) He should make sure that prescribed treatment is modified as often and as drastically as may be necessary to meet treatment needs or conversely, liberalized as rapidly as satisfactory progress under the one in force would seem to justify. To be successful, whether much or little, treatment *must* be adequate i.e., prescribed in "quantity sufficient" for the purpose—to get the job done in each individual case without regard to the extent of the disease, and irrespective of what other patients with corresponding involvement may require to achieve a similar result. *Treatment must not be discontinued* until there is good reason to believe the patient is completely and permanently well.

---

### Contact Lenses.

Two-thirds of those who want the new contact or corneal lenses—even just for appearance—can wear them safely. However, they are warned against "high-pressure advertising" and the lenses "should be obtained only through qualified eye doctors who will ethically advise their use only when careful study and examination prove their need and indicate they may be used." "This will protect the patients' eyes and pocketbooks," Drs. Maurice W. Nugent and Conrad Berens said in the September Today's Health magazine, published by the American Medical Association.

The newest of these invisible lenses is the corneal lens, which is much smaller than a dime and covers only the cornea, or transparent covering of the pupil and iris. The contact lens has a central portion over the cornea and a flange extending out over the sclera, or white part of the eyeball. The latest lenses can be worn without fluid, which was a stumbling block to earlier types of lenses. The only real hazard in the new lenses is corneal abrasion. However, they said, the minute rubbed spots heal quickly by themselves when the lenses are taken off for a while.

Persons who can wear the lenses include first those who because of accident or disease cannot see well with spectacles; those who have had cataracts re-

moved and find lenses more satisfactory than spectacles, and those who wish them for appearance only. Once this last group was not considered, but now it makes up the largest part of all wearers.

There is no real danger in contact or corneal lenses if the patient will accept the advice of his qualified eye doctor, who examines for disease and eye muscle disorder, and accurately measures for the best type of lens. Then he supervises the important training period during which the patient learns to relax his eyelids and tolerate longer wearing periods.

About a third of all persons fitted cannot tolerate the lenses at all. Another third can wear them for special purposes for limited times—such as actors while on stage. The last third is "the fortunate group who can wear them to the exclusion of spectacles, if the lenses are well-fitted and the wearer cooperates completely with his qualified eye doctor."

"These new types of lenses are still too far from perfection to permit their being sold to the general public by any high-pressure advertising or salesmanship." Obtaining them only through qualified eye physicians will protect the public and also "permit this type of lens development to continue without the unfavorable criticism that will come if too many people buy them only to find that their eyes won't tolerate them."



## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### Some Recent Activity in the Field of Mental Health

In 1953 the Governors' Conference, held in Seattle, unanimously endorsed the report "Training and Research in State Mental Health Programs", prepared by the Council of State Governments.

That report strongly recommended interstate compacts and arrangements for the training of psychiatric personnel and joint participation by the States in mental health research. It also recommended periodic regional mental health conferences devoted to a discussion of how these and other efforts could be accelerated.

In November 1953, the Southern Governors' Conference at Hot Springs, Virginia, took notice of this action and adopted the following:—

The Southern Governors' Conference therefore recommends:—

(1) That the Southern Regional Education Board begin an immediate survey of facilities for the training of psychiatric personnel in the South, and that it report to this Conference those institutions best qualified to take additional students in the psychiatric disciplines from states which have no such training facilities.

(2) That the Board also initiate a survey of institutions doing mental health research in the South, and that it recommend to this Conference those institutions capable of being enlarged to do additional research.

(3) That upon completion of the above surveys by the Board, but in any case not later than July 30, 1954, a Southern Regional mental health conference be held to discuss the surveys and draw up interstate compacts in mental health research and training.

(4) That, in the interim, the individual states make official surveys of their training and research facilities—with particular emphasis upon raising mental institutions in each state to the level of residency or affiliate accreditation—and that the results of these surveys be presented to the 1954 regional mental health conference.

(5) That the Southern Regional Education Board

be requested to report the results of its study and any action taken to the 1954 Southern Governors' Conference.

In keeping with the above Resolution adopted by the Southern Governors' Conference, the Southern Regional Education Board Mental Health Training and Research Project was initiated and finances for its operation were secured from the National Institute of Mental Health, a branch of the U. S. Public Health Service.

As a part of this project state committees were appointed by the governors. The role of the State committee, as described, is as follows:—"State committees appointed by the governors will survey state and university programs of mental health training and research in order to identify needs and resources—the committees will work from uniform questionnaires, prepared by the Project Staff with the advice of the appropriate professional association."

In February, 1954, the Honorable Thomas B. Stanley appointed Dr. Joseph E. Barrett, Commissioner of the Department of Mental Hygiene and Hospitals, Dr. R. Finley Gayle, Chairman, Department of Psychiatry and Neurology, Medical College of Virginia, and Dr. Frank J. Curran, Department of Neurology and Psychiatry, University of Virginia, as the Virginia committee. Dr. Barrett was elected chairman of this committee.

All three members of the committee attended a meeting with the Project Staff in Nashville in early February at which time the detailed procedures for the individual state surveys were developed.

In Virginia the survey was handled from the Department of Mental Hygiene and Hospitals with the assistance of additional personnel from Eastern State Hospital. In March 1954 appropriate schedules were sent to deans of graduate schools, to university department heads interested in the preparation of mental health workers, to directors of schools of nursing, and to all mental institutions and mental guidance clinics, including Veterans Administration facilities.

The recommendations compiled from the facts so collected are as follows:

1. That the quality and scope of the training program for psychiatrists in Virginia be enlarged by adding qualified psychiatrists to the neurological and psychiatric teaching staffs at the University of Virginia and the Medical College of Virginia; by establishing combination residences in order to pool the psychiatric experience in these hospitals, in State hospitals and in guidance clinics; by providing fellowships and special funds for those on leave to secure additional training so that patient care and educational progress can proceed simultaneously.

2. That full collaboration of clinical psychologists and psychiatrists be brought about in mental hospitals by requiring that one member of the psychological team in each organization have preparation at the doctorate level plus experience comparable in years and variety to the psychiatrists with whom he works. Until preparation of this competency can be made available in Virginia, State fellowships could be provided, when necessary, to permit preparation elsewhere.

3. That a course in psychiatric nursing be set up on a graduate level in Virginia so that sufficient qualified personnel can be found to fill the 87 positions for which money has been budgeted and to add others as more funds are made available.

4. That a concerted effort be made to encourage college graduates with desirable personality qualifications to prepare as psychiatric social workers at the School of Social Work, R. P. I. where an additional 19 students could be accommodated with the present faculty. If Virginia applicants do not apply in the near future, these facilities should be made available to college graduates from other states. More public interest might also fill the 15 positions for which budgets are now available and others badly needed to enlarge the work.

5. That the public be made aware of the pressing need for funds to strengthen the teaching staffs training psychiatrists, clinical psychologists at the master's level, and psychiatric nurses; also to make adequate research possible. In this connection it should be pointed out that when present teaching hospitals are badly understaffed, as are guidance clinics and State hospitals, little can be done beyond providing routine care for patients. Time for analyzing cur-

rent methods, evaluating results and instituting new treatments is completely lacking. Only sufficient funds can release keen minds for research while their work is taken over by additional staff.

6. That coordination of effort toward stimulation and supervision of research be effected by an autonomous organization serving the sixteen states involved. Such an organization could be served by regional professors carrying growth in thinking from area to area.

At the Regional Mental Health Conference held in Atlanta July 21-24, 1954, it was recommended that a Southern Regional Mental Health Training and Research Council be established as an integral part of the Southern Regional Education Board and that each state, be requested to allot \$8,000 annually to finance the operation.

These recommendations will all be presented to the Southern Governors' Conference in November 1954, and it is our earnest hope that they will be approved unanimously.

Advance in Virginia, however, rests primarily on the understanding and action of those in the state. Those answering the schedules previously mentioned—men closely associated with the problems of educating workers in the psychiatric field and of stimulating research in this area—did not hesitate to point out that at least \$568,000, in addition to present budgets, should be made available yearly to place enough workers in teaching units, service areas (hospitals and clinics and guidance centers), and research programs to push the work ahead.

The reports include a special table showing how these extra funds would be spent: \$267,708 to make it possible to employ the needed qualified psychiatrists; \$118,266 for clinical psychologists, \$94,031 for psychiatric social workers and \$31,781 for placing a sufficient number of qualified nurses. These experts also suggested additional laboratory equipment needed at the University of Virginia which could be purchased for \$25,000; another \$25,000 needed there for financing fellows and interns; and an additional \$30,000 for the maintenance of a greater number of beds where patients could be treated in an enlarged teaching and research program.

## MEDICO-LEGAL NOTES

## Serological Tests in Disputed Paternity Cases\*

The use of blood grouping tests in relation to paternity is intimately bound up with the development of blood transfusion and the discovery of blood groups by Landsteiner, about the turn of the century.

Landsteiner established the fact that all human beings may be divided into certain distinct blood groups, the identity of each group depending upon the presence in the blood of specific isoagglutinins and isoagglutinogens independent of disease. He called his original groups A, B, and O. The fourth and rarest group was discovered by Von Decastelo and Sturli. This was the AB group. Ostenberg and Epstein and Von Dungern and Herszfeld proved that the four Landsteiner groups are inherited. Bernstein (1925) discovered the exact mechanism of heredity and showed that these inherited factors follow Mendel's laws.

In 1927 two other factors were found in human blood. They were labeled with the letters M and N. Every person's blood contains one of the two or both together, thus permitting the recognition of three further varieties of blood, known as type M, N, and MN.

There is no one whose red cells are devoid of both M and N, in sharp contrast to the A and B factors which are absent in group O.

It must be clearly understood at the outset that the use of blood tests are of value only in proving that an individual could not be the alleged father of the child in question. Under no circumstances can

it ever prove that the alleged father is indeed the father. In other words, the test operates as a purely negative finding.

The application of blood grouping tests to legal procedure is based on the following facts:

(1) Blood groups can be determined at birth, but it is advisable to wait at least a month after the birth of a child before issuing an opinion regarding its group.

(2) Blood groups remain unchangeable during life.

(3) Blood grouping tests can be repeated as many times as necessary.

In the hands of competent qualified examiners, the tests are reproducible.

Moreover while it is preferable it is not absolutely essential in all cases to have the blood of the mother, child and father. Often the father can be excluded on the basis of the child's and his blood.

While Virginia, as well as many other states, does not have a statute concerning the use of blood grouping in paternity cases, at least two courts, Maine and Maryland, appear to have taken judicial notice of the validity of the A-B-O and M-N grouping tests. The Maryland court said in taking notice of the validity of the tests, "Blood tests are now accepted everywhere, scientifically, as accurate, and the courts and legislatures have generally followed the same view."

The court seems to overstate the degree of acceptance by other courts in general, but it does show a trend which will be followed as more and more states pass upon the question.

\*Contributed by Dr. Francis J. Januszski, Fellow in Legal Medicine, Medical College of Virginia.

## Are You A Good Doctor?

Dr. Merrill D. Prugh, President, Ohio State Medical Association—"To be a good doctor, each one of us must:

"1. Give good medical service.

"2. Make our services available at all times to all who need them.

"3. Make our fees fair to both the patient and the doctor.

"4. Make our personal interest in the patient known to the patient.

"5. Treat both patients and fellow practitioners as we would like to be treated.

"Old, you say, but so is the best rule of human conduct ever given, namely, The Golden Rule, and in 2,000 years no one has been able to give us a better one.

"If we will do these few simple things, public relations will be no unsolved problem and socialized medicine no threat. We will have the respect of the public and best of all, our own self-respect."



# WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

*President* ..... MRS. K. W. HOWARD, Portsmouth  
*President-Elect* ..... MRS. MAYNARD EMLAW, Richmond  
*Recording Secretary* ..... MRS. LEE S. LIGGAN, Irvington  
*Corresponding Secretary*—  
    MRS. LEMUEL E. MAYO, Portsmouth  
*Treasurer* ..... MRS. WILLIAM C. BARR, Richmond  
*Publication Chairman* MRS. WM. S. GRIZZARD, Petersburg

## New President.

Lucia K. Emlaw, wife of Richmond physician, Dr. Maynard R. Emlaw, was installed as president of the Woman's Auxiliary to The Medical Society of Virginia on November second.

Born in St. Peter, Minnesota, she has lived since infancy in Chesterfield County and in Richmond. Possessed of rare charm and talent, she has a wide



MRS. MAYNARD EMLAW  
President. Woman's Auxiliary

variety of interests, from which many local organizations have derived benefit. For example, the League of Women Voters are accustomed to having her model glamorous outfits in their annual fashion shows, but are equally willing to accept her decision

on some intricate item of parliamentary procedure. Members of the Tuckahoe Woman's Club have enjoyed her as a sprightly comedienne in their plays; she has for several years been Drama Department chairman of this organization. A regular soprano in the Bethlehem Lutheran Church choir, she is also its president. Lucia holds offices in the Friday Study Club and the Parliamentary Law Club of Richmond, and is a member of the National Association of Parliamentarians. In addition to serving on the General Board of Sheltering Arms Hospital, she enjoys doing volunteer clerical work there.

The Auxiliary's new president believes that an organized group of doctors' wives can be the most effective force for promoting good health projects and health education in their community. "Although we enjoy belonging to women's clubs and other groups," she said recently, "I feel that the Auxiliary and the Church are the two places where our efforts have the deepest meaning." Lucia has found that doctors' wives everywhere have a kinship of interests and problems. After touring in some half-dozen European countries this summer ('54), she observed excitedly, "Why, they are exactly like us. They work on health projects, and have to cope with the same delayed meals, telephone calls and cancelled social engagements as we do!"

Since joining the Woman's Auxiliary to the Richmond Academy of Medicine in 1948, Lucia has worked tirelessly in one office after another on both state and local levels. She was the State Auxiliary's Legislation Chairman for three years, and has a wide acquaintance among our lawmakers. Her good work in the Woman's Auxiliary to the Southern Medical Association has led to her being elected a vice-president for 1954-'55.

Lucia Emlaw is eagerly anticipating her term of office as the chief representative of the Medical Auxiliary, because she sincerely believes that through its activities doctors' wives can act as a liason between the medical profession and the public, and can render real and active aid to Virginia's doctors.

M.G.F.

## Southwestern Virginia.

The Auxiliary to the Southwestern Virginia Medical Society met on September 16th at the Hotel Roanoke. Mrs. C. C. Hatfield, Saltville, President, presided. Members and guests were welcomed to the meeting by Mrs. Reverdy Jones of Roanoke.

New officers for the coming year were elected as follows: President, Mrs. M. C. Newton, Narrows; president-elect, Mrs. F. C. Bedsaul, Floyd; vice-president, Mrs. Randolph Chitwood, Wytheville; secretary, Mrs. E. L. Bagby, Pearisburg; and treasurer, Mrs. J. F. Shaffer, Abingdon. They were installed by Mrs. James P. King, vice-president of the State Auxiliary.

Before and after the meeting, refreshments were served by the Roanoke ladies. A banquet at the Hotel Roanoke completed the day.

CORNELIA P. STONE (MRS. C. A. JR.)

### Petersburg.

The first fall meeting of the Petersburg Auxiliary was held at the Petersburg General Hospital on September 28th. Mrs. Clyde Vick, Jr., president, introduced and welcomed the following new members: Mrs. W. H. Stout, Mrs. C. L. Saylor, Mrs. W. P. Youngblood, Mrs. E. P. Yerby, Mrs. H. S. Gould, and Mrs. Harvey Goode.

The auxiliary voted to aid the National Council of Jewish Women in manning the Red Cross Blood-mobile during its visits to Petersburg this year.

Upon recommendation of the executive board, the Auxiliary also adopted the following projects:

To offer assistance and money to the class for mentally retarded children in Petersburg;

To collect and store children's clothes to be used by children who are placed in foster homes;

To collect samples of drugs from their husbands' offices to be turned over to the clinics at Petersburg General Hospital;

To aid the Mental Hygiene Society of Virginia by all members joining the Southside Area Chapter; and

To offer service to the Petersburg Cancer Clinic.

The auxiliary has a committee to establish a nurses' club and to investigate how to set up a scholarship for a deserving nurse. Action will be taken on this at the October meeting.

MRS. JOSEPH P. WHITTLE  
*Publication Chairman*

### New Books.

The following books are among those which have recently been received by the University of Virginia Medical School Library. They are available to our readers in that area:

- Behrens—Atomic Medicine
- Boies—Fundamentals of Otolaryngology
- Burch—A Primer of Cardiology
- Burch—Spatial Vectorcardiography
- Clarke—Iron Transport Across Membranes
- Fisher—Protein Metabolism
- Freud—On Aphasia
- Greenacre—Affective Disorders
- Greenberg—Chemical Pathways of Metabolism
- Howorth—A Textbook of Orthoptics
- Pratt—Cardiovascular Surgery
- Schinz—Roentgen Diagnostics
- Walker—Biochemistry and Human Metabolism
- King—Psychomotor Aspects of Mental Disease
- New York Diabetes Association—Newer Concepts of the Causes and Treatment of Diabetes Mellitus
- Longerich—Aphasia Therapeutics
- Mayo Clinic—Anesthesia Abstracts
- Progress in Neurology and Psychiatry
- Yater—Fundamentals of Internal Medicine
- Year Book of General Medicine
- U. S. Army Medical Service—Symposium on Operative Eye Surgery and Recent Advances in Ophthalmology
- Welch—Principles and Practice of Antibiotic Therapy
- Bacon—Atlas of Operative Technic: Anus, Rectum and Colon
- Lerner—Dermatologic Medications

Lillie—Histopathologic technic and practical histochemistry

Scott-Brown—Methods of Examination in Ear, Nose and Throat

Hale—Anesthesiology

Hoffman—The Biochemistry of Clinical Medicine

**Films in Psychiatry, Psychology and Mental Health.**  
By ADOLPH NICHTENHAUSER, M.D., MARIE L. COLEMAN, and DAVID S. RUHE, M.D. Medical Audio-Visual Institute of the Association of American Medical Colleges. Health Education Council, New York and Minneapolis. 1953. 269 pages. Price \$6.00.

This book is a result of a great deal of work. It is an excellent reference book, not only in determining the films available but also in its suggestions concerning methods of discussion and utilization of these films in visual education. Forty-one films are reviewed. The review consisting of a brief description of the film, and an appraisal of it from the point of view of its content, presentation, effectiveness and utilization. In addition 50 other available films are listed giving title, time of running and a brief description. A very nice audience guide of the 41 films which have been reviewed is to be found at the beginning and ending of the book.

I feel that this work is well worthwhile as a reference book and an addition to the psychiatric literature to be found in a medical library.

LUCY S. HILL, M.D.

## MISCELLANEOUS

## WORK PRESCRIPTION

## A Co-operative Procedure with the Practicing Physician in Vocational Rehabilitation

WILLIAM F. HICKEY, JR., M.D.,\*

DOROTHY A. OATES†

SIMON S. OLSHANSKY‡

Boston

The phrase "light work," used so often by physicians to a patient or to his family or included in reports to insurance companies or welfare agencies, has little meaning by itself.

All work requires nearly maximal effort and in employment today every worker, whether bookkeeper or longshoreman, is expected to deliver a full day's work to the limit of his abilities. To the partially paralyzed or the cardiac patient, even getting to and from work may be arduous although the work itself may be "light." To the psychoneurotic or the anxiety-ridden person intense concentration may be more difficult than a day's labor in the streets for a healthy man. All work, then, is "light" or "heavy," depending on the physical and emotional capacity of the individual worker. It is self-evident that what may be "light" for one person may be strenuous for another.

One should consider, then, how a recommendation for "light work" may affect the patient to whom it is addressed. Though puzzled, he attempts to follow this poorly defined medical prescription, perhaps with the consequence that he finds no work and begins to question his personal adequacy. Because of repeated failures to obtain "light work" he becomes confused and discouraged and does not put his best foot forward in his interviews with prospective employers. Family quarrels have occasionally developed from a misunderstanding of such recommendations. Wives have charged their husbands with indolence because they could not obtain employ-

ment. In some cases the medical recommendation of "light work" has deprived patients of their eligibility for assistance under the provisions of the Aid to Dependent Children and Disability Assistance programs, and has jeopardized the rights of workers under the Workmen's Compensation Act.§

When he prescribes "light work" for a patient, a physician may be aware, through years of experience and as a result of thorough knowledge of the patient's limitations, of the effort that such a patient is able to make. But how clear is the job picture in the doctor's mind? In general, physicians have not evaluated the patient's capabilities or limitations and compared them to the demands of specific jobs. They cannot know the various types of activity that each job entails. Even after careful perusal of the *Dictionary of Occupational Titles*, one can never be sure what activities will be required in a given position. For example, the job of shipping clerk in one company may be purely clerical, whereas, in another company, it may be so strenuous as to be suitable only for a vigorous and athletic worker.

The physician may avoid many disappointments for his patients by turning to the resources of the Commonwealth available for people of working age whose physical or emotional disabilities are substantial employment handicaps and yet who may be expected, if properly served, to become employable within a reasonable length of time. Co-operative procedures with the participation of physician, medical social workers in hospitals and clinics, and vocational counselors in the State Division of Vocational Rehabilitation should lead to a job objective that meets the physical capacities as well as the over-all interests and abilities of the patient. Of the team the patient himself is the most important member; the family must also understand its part in the co-operative procedure. It should be emphasized that work capacity depends not only on what a person

Reprinted from *The New England Journal of Medicine*, Vol. 250, No. 21, May 27, 1954, with permission of the Journal and the authors.

\*Chief medical consultant, Massachusetts Division of Vocational Rehabilitation; assistant to the visiting surgeons, Boston City Hospital.

†Supervisor of physical restoration, Massachusetts Division of Vocational Rehabilitation.

‡Assistant supervisor, Massachusetts Division of Vocational Rehabilitation.

§The opinions stated in this article are those of the authors and are not intended as a policy statement of the Massachusetts Division of Vocational Rehabilitation.



can do but on what he believes he can do. A successful program works not *on* a patient but *with* him.

To fulfill his part in the plan, the physician should concentrate his attention on specific activities that the patient may or may not be able to do. Preferably, the focus should be on the positive side. To achieve some degree of uniformity, a sample chart of activities has been suggested (Table I). In completing this chart, the doctor indicates the guideposts needed by his patient in daily routine activities and also provides a prescription for the vocational counselor whose responsibility is to help the patient obtain employment. The type of work that meets the patient's needs is determined only in part by his physical capacity. By describing permissive activities for the patient in accordance with the chart, the physician provides the basis for the complete evaluation necessary in planning for the vocational objective. The whole team must decide upon the patient's total personality in both genetic and dynamic terms and must also assess his readiness for vocational rehabilitation.

The final determination of employability, distinct from physical ability to work, must be the judgment of the vocational counselor. He is the member of the team who knows the industrial opportunities open within a given community, as well as the hiring specifications of employers at a given time, and who can fit together the various contributions of the other members of the team into a workable plan. In practical terms, the likelihood of getting work depends

less on the physical capacity of the patient than on such factors as age, education, and recency of work experience. Moreover, the patient's personality, his ability to get along with others and his drive for independence are added elements in his employability. In the last analysis, finding opportunities for employment depends to a large extent on the knowledge of the labor market at a given time and on an acquaintance with the hiring specifications of employers within that labor market.

CASE REPORTS

*Case 1.* A 59-year-old man with a diagnosis of rheumatic heart disease with mitral stenosis and insufficiency and atrial fibrillation, complicated by osteoarthritis of the lumbar spine, was referred to the Massachusetts Division of Vocational Rehabilitation by the Massachusetts Heart Association for help with placement in employment suitable to his disabilities. On digitalis he was well compensated. Although born in Russia, he read and wrote English well. He had been out of employment for 13 months, living on his savings and income from his wife's part-time employment. His work history had been excellent, mainly as a shipper in department stores. He know how to pack china and fine clothing and was familiar with the mailing zones, both domestic and foreign. The problem was to return him to employment suitable to his disability, utilizing his past experience. By a chain of fortuitous circumstances, a shipping job was found in a small company. The job was studied and found to be within his physical capacities, and the company was willing to make some minor job adjustments. He was placed in an area of familiarity, the emotional trauma associated with job change (especially for an older worker) thus being minimized. In this case successful job placement depended on searching for a *specific* job rather than "light work" in general.

*Case 2.* A 28-year-old single man was admitted to a tuberculosis sanatorium in 1939 with a diagnosis of bilateral pulmonary tuberculosis. His work experience was in unskilled jobs, such as porter and watchman, probably owing to the fact that he entered the labor market during the depression, having graduated from high school in 1930. He was the only child and the sole support of a widowed mother. He was hospitalized from 1939 to 1951, when he was discharged from the sanatorium, the tuberculosis apparently having been arrested. His mother had been

TABLE 1. *Activities Chart.*

Activity	No Limitation	Some Limitation	In Hours
Walking			
Climbing (stairs)			
Lifting (in pounds)			
Carrying (in pounds)			
Stooping			
Running			
Pushing			
Reaching			
Environmental conditions to be avoided (specify):			
Total hours of activity recommended at this time:			
in six months:			
Use of public transportation recommended	Yes	No	
Other limitations—specify:			
Other comments (describe patient's major capabilities):			

forced to apply to public welfare for support during his hospitalization. He was referred to the Massachusetts Division of Vocational Rehabilitation by the physician who was following his case after discharge. The problem was to provide a skill within his physical and intellectual capacities and also within his interests. It was decided by the patient and the vocational counselor that television repair would be a suitable vocational objective. The doctor agreed with this plan in conference with the vocational counselor. After training of about a year and a half, the patient was placed as an electronic technician, however, this job being much less strenuous than that of a television repairman and still in line with his training. Thus, despite his present age (43 years) and long hospitalization, the client is suitably employed, vocational training having provided not only a skill but also an opportunity for

much needed resocialization before he entered the employment world.

#### SUMMARY AND CONCLUSIONS

The physician is expected to focus on the permissive activities that a patient may undertake by completing an estimate of physical activities rather than simply recommending "light work."

Referral of the handicapped person to community resources, such as the State Division of Vocational Rehabilitation, which are specially structured for vocational counseling, training and placement, is urged.

Selective placement for employment depends not only on a handicapped person's physical and mental capacity but also on age, education, quality and recency of work experience, personality structure and the particular opportunities within a given labor market at a given time.

---

#### THE SPEECH CENTER

When thinking of a handicapped child or adult, a physician seldom thinks of one with a speech or voice disorder, and yet approximately 5% of our population have major speech defects. Why is this not recognized? Why do we not know about it? Speech defectives do not wear braces or go about on crutches. They either cannot speak for themselves or because of their problem are relatively quiet and reserved. The disorder does not show. In all phases of medical education the thorough study of the speech function and its disorders is unusual, yet in the special areas of pediatrics, orthopedics, neurology, psychiatry, and otolaryngology speech disorders are necessarily encountered in relative abundance. Most physicians are not prepared to examine, diagnose, or treat these cases and the patients must be referred elsewhere.

In the Richmond area, the Speech Center (sponsored by the Junior League of Richmond), located at 231 North 12th Street, is the private organization prepared to offer these services. For the past four years this speech center has been available to children only. However, beginning in September 1954 it was opened to adults also. Speech examination, diagnosis, and therapy will be under the direction of Mr. John C. Collison. Mr. Collison comes to Richmond from the University of Florida Speech

and Hearing Clinic where he has completed preliminary requirements for the Ph.D. degree. He received his M.A. from Northwestern University and B.A. from Dennison University in Ohio. As assistant to Dr. James Mullendore he was at the University of Virginia Speech Clinic for two years prior to beginning work on his doctorate degree. Mr. Collison is a professional member of the American Speech and Hearing Association, the organization designed to meet the needs of the speech handicapped.

The Speech Center and Mr. Collison recognize the need for cooperation between speech correction workers and other professional and lay groups interested in the speech handicapped. As it is stated in the Journal of the American Speech and Hearing Association, "disorders differ as to their causes, basic symptoms, the conditions by which they are affected, and the indicated approaches to therapy. In working with the speech of the cerebral palsied, the speech correctionist must cooperate with medical specialists in orthopedics, pediatrics, and neurology, and with physiotherapists, occupational therapists, psychologists, teachers and, of course, the parents. In working with the speech of the hard of hearing another somewhat different pattern of cooperative relationships, including particularly the otologist or otolaryngologist, is to be observed. With cleft palate cases

the oral surgeon, orthodontist, and prosthodontist are all closely concerned. At the same time, there are many cases of articulatory defect or of stuttering in which the speech correctionist may best take sole responsibility. Even in such cases, however, the speech correctionist must be prepared to recognize the need or lack of need, for referral to various specialists."

The Speech Center, which is affiliated with the Medical College of Virginia, is prepared to handle the following problems of children: functional articulatory, stuttering, voice, post-operative left palate, cerebral palsy speech, retarded speech development, hard of hearing speech, adult cases of stuttering, articulation, voice problems, aphasia, and laryngectomized speech.

There is a tendency among parents and doctors to adopt a wait and see attitude regarding speech problems. However, at an age of 4 to 6 years and with proper cooperation, many minor speech problems are more amenable to correction than when children have grown older. Also, often behavior problems are solved when a child no longer has an inferiority complex because of poor speech.

Speech defectives appear to be retarded scholas-

tically and fail to take advantage of college opportunities out of proportion to intelligence. They may not, as children, achieve normal relationships with schoolmates or family. As adults, their earning power is cut, on the average 25% by a speech defect. Of course, in many instances, as with aphasia, the earning power is completely lost. As far as the personal adjustment which an individual has to make to life, a speech defect may rob one of poise—it is frustrating and demoralizing. Aggression, hostility, are to be found among children and adults frustrated in speech.

The aim of the Speech Center is to offer the best available speech diagnosis and therapy and to sponsor an interest in speech correction. With the monetary support of the Junior League of Richmond and other interested individuals, it is possible to charge nominal fees. Also applications for even lower fees or for free diagnosis and therapy are considered on the basis of need. At the discretion of the director, individual or group therapy is used.

Any questions regarding the work of the Center should be addressed to the Director, The Speech Center, 231 North 12th Street, Richmond, Virginia.

MRS. GEORGE FLOWERS, JR.

## New Books.

The following are among recent additions at the Tompkins-McCaw Library of the Medical College of Virginia and are available to our readers under usual library rules:

Ackerman and Regato—Cancer, diagnosis, treatment and prognosis.

Banyai—Non tubercular diseases of the chest.

Boell—Dynamics of growth processes.

Bourne, ed.—International review of cytology.

Buetti-Bauml—Funktionelle rontgendiagnostik der hal-swiebelsaule.

Burch—Spatial vectorcardiography.

Cook—Progress in organic chemistry.

Garland—The physician and his practice.

Gordon ed.—Pigment cell growth.

Hawk—Practical physiological chemistry.

Holt—Pediatrics.

Johnson—The kinetic basic of molecular biology.

Josiah Macy—Liver injury.

Lillie—Histopathologic technic and practical histochemistry.

McAuley—The concept of schizophrenia.

Moloy—Clinical and roentgenologic evaluation of the pelvis in obstetrics.

Mursell—Using your mind effectively.

Nelson—Textbook of pediatrics.

Nuclear Science Series—Basic mechanisms in radiobiology, physical and chemical aspects.

Oppenheimer—Science and the common understanding.

Pulaski—Surgical infection: Prophylaxis, treatment and antibiotic therapy.

Sarton—Galen of Pergamon.

Schintz—Roentgen diagnostics.

Schoemackers—Atlas postmortaler angiogramme.

Schurr—Naturally yours.

Sebrell and Harris—The vitamins, chemistry, physiology, pathology.

Stevenson, ed.—Administrative medicine.

Sumpter and Miller—Heterocyclic compounds with indole and carbazole systems.

Symposium on problems of gerontology.

Vaughan—Primer of allergy.

Von Spehlmann—Sigmund Freud's neruologische schriften.

Welch—Principles and practice of antibiotic therapy.

Whaley—Principles of biology.

Year book of medicine.



## EDITORIAL

---

**Carrington Williams  
Our New President**

**W**ITH the present meeting of The Medical Society of Virginia in Washington, D. C., Carrington Williams becomes its 108th president. He was born in Richmond, Virginia, June 21, 1889, the oldest of six children of Walter Armistead Williams, a successful and respected business man, and Alice Marshall (Taylor) Williams, a woman of unusual ability as well as personal charm.

Carrington Williams attended McGuire's University School in Richmond, and in 1906 entered the University of Virginia where his friends remember him as an outstanding and popular student in both the academic and medical schools. He was deservedly the recipient of some of the highest honors the University had to offer. Here he joined Delta Psi fraternity and was later admitted to Phi Beta Kappa and Alpha Omega Alpha. He received his A.B. degree in 1910, and his M.D. degree in 1913.



CARRINGTON WILLIAMS, M.D.  
President, The Medical Society of Virginia

After two years training at St. Luke's and St. Mary's hospitals in New York City, he returned to Richmond to enter an association with Dr. Stuart McGuire at St. Luke's Hospital and to begin what was to become an enviable surgical career.

It was at this time that he married the attractive and gifted Fannie Braxton Miller. Of their three sons, Dr. Carrington Williams, Jr., and Dr. Armistead Marshall Williams have followed their father in the pursuit of medicine. The third son, Lt. Mason

Miller Williams, USAAF, lost his life over Munich, Germany, on a bombing mission in 1944.

The First World War was an interruption which took Dr. Williams to training camps and ultimately to the European Theatre as a member of the surgical division of Base Hospital, 45 AEF, located at Toul, France, under the command of Colonel Stuart McGuire. Mustered out of service in 1919 with the rank of Captain M.C., U.S.A., he naturally realigned himself with his former chief in the organization and operation of the then nascent McGuire Clinic. Except for two brief intervals when he practiced independently he continued this connection until 1944 when he joined the surgical staff of Stuart Circle Hospital.

Carrington Williams has always taken a lively interest in the teaching of medicine, and his talents as surgeon and teacher have been generally recognized and rewarded. Beginning as an instructor in anatomy in the Medical School at Charlottesville, with change of residence he accepted teaching positions in the Medical College of Virginia in Richmond, and passing through the various grades of the surgical department was in 1939 appointed professor of Clinical Surgery, a position he still holds. His sympathetic and helpful concern for the younger men who have come under his influence has followed the best tradition of the medical profession.

His concentration of interest has been upon the diseases of the thyroid gland and the gastro-intestinal tract, and in these areas of surgery his skill and success has been recognized and in these fields also he has contributed ably to current medical literature.

Perhaps his professional attainments are best reflected in the various medical and surgical societies in which he holds membership. He has been president of the Richmond Academy of Medicine and of the Southern Society of Clinical Surgeons, and several times has represented Virginia in the House of Delegates of the American Medical Association. He has been a vice-president of The Medical Society of Virginia, and is a member of the Southern Surgical Association as well as of the American Surgical Association.

His career has been marked also by alignments and activities that indicate a deep social consciousness, a warm heart and an unselfish devotion to the service of others. These facets of his character have been conspicuous in such things as his chairmanship of the Richmond Branch of the American Red Cross during World War II, his active participation in many phases of the Community Chest program, and his enthusiastic support of Richmond's new War Memorial community hospital. He is one of those rare individuals who has endeared himself to a host of friends and patients by his cordial manners, his ability to inspire confidence, and by his obvious mastery of the skills of his profession.

Carrington Williams brings to his new office familiarity with the affairs and problems of The Medical Society of Virginia, a wide and friendly acquaintance with its membership, a high dedication to the economic, ethical, scientific aspirations of medicine, a tolerant, just and kindly spirit, a record of, and a capacity for work, and a professional reputation that will adorn the office. He is the kind of man The Medical Society of Virginia delights to honor.

W.B.B.

## SOCIETY PROCEEDINGS

---

### **The Southwestern Virginia Medical Society**

Met in Roanoke on September 16th with the president, Dr. R. C. Potter, presiding.

A Conference on Therapeutics was given with Dr. H. B. Mulholland, University of Virginia, serving as Moderator. The following subjects were discussed: Treatment of the Anemias of Childhood by Dr. Sarah R. Chitwood, Pulaski; Cortisone, ACTH and Related Drugs by Dr. Stuart Catron, Abingdon; Steroids and Hormones by Dr. Robert B. Jones, Jr., Roanoke; Use of the Antibiotics by Dr. M. E. McMillan, Marion; Treatment of Diabetes by Dr. Charles A. Hefner, Roanoke; and Speculations on the Common Cold by Dr. Richard O. Smith, Pulaski.

Following a social hour, Dr. Geoffrey T. Mann, Chief Medical Examiner of the State of Virginia, Richmond, spoke on Unusual Aspects of Medico-Legal Practice.

The following officers were installed: President, Dr. C. C. Hatfield, Saltville; vice-president, Dr. James L. Chitwood, Pulaski; and secretary-treasurer, Dr. Reverdy Jones, Roanoke.

### **The Williamsburg-James City County Medical Society**

Met on September 8th at the home of Dr. Herman Bailey, Yorktown, for cocktails and dinner. Drs. Bailey, John W. Martin, and J. R. Turnage were hosts for the meeting.

Dr. Walter B. Martin, President of the American Medical Association, was guest speaker.

### **Buchanan-Dickenson Medical Society.**

Dr. Lewis Aaron, Grundy, has been elected president of this Society, succeeding Dr. W. A. Cover

who has moved to Tazewell. Dr. J. S. Richardson, Grundy, is secretary-treasurer.

### **Fourth District Medical Society.**

This Society met at South Hill on September 14th under the presidency of Dr. A. Tyree Finch, Farmville. The following program was presented: Sciatica—Etiology and Treatment by Drs. William M. Deyerle and Virgil R. May, Richmond; Comments on the History of Psychiatry by Dr. Walter J. Brennan, Petersburg; and Remarks on the Use of Digitalis by Dr. N. F. Wyatt, Petersburg.

### **Lynchburg Academy of Medicine.**

The regular monthly meeting of the Academy was held at the Lynchburg General Hospital on September 13th. Dr. Elam C. Toone, Jr., of the Medical College of Virginia, Richmond, spoke on "Use of Cortisone in Treatment of Rheumatoid Arthritis".

### **The Medical Association of the Valley of Virginia,**

At its meeting in Staunton on September 23rd, elected Dr. H. G. Hudnall, Covington, as president.

### **Virginia Peninsula Academy of Medicine.**

The first fall meeting of the Academy was held on September 15th with the social hour and dinner at the James River Country Club. At the business session which followed, Dr. Guy Odom, Professor of Neurosurgery, Duke University School of Medicine, spoke on "Acute Subarachnoid Hemorrhage".

Dr. O. W. Ward, Sr., Phoebus, is president of the Academy and Dr. W. T. Watkins, Jr., Newport News, secretary-treasurer.

---



## NEWS

### Calendar of Coming Events

EVENING MEDICAL LECTURES—University of Virginia, School of Anatomy, Charlottesville, November 8. Dr. Lawrence E. Young, Rochester, N. Y., "Some Newer Concepts of Hemolytic Disorders"

SOUTHERN MEDICAL ASSOCIATION—St. Louis, Missouri, November 8-11

AMERICAN COLLEGE OF SURGEONS—Clinical Congress—Atlantic City, N. J., November 15-19

EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, November 22. Dr. Lewis Thomas, New York City, "The Pathogenesis of the Generalized Vascular Lesions Caused by Endotoxins"

EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, November 29. Dr. Frank L. Engel, "The Endocrine Control of Metabolism"

AMERICAN MEDICAL ASSOCIATION—Clinical Meeting—Miami, Florida, November 29-December 2

EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, December 6. Dr. William G. Hardy, Johns Hopkins Hospital, "Hearing and Language Disorders in Young Children"

SECOND ANNUAL CONFERENCE ON THERAPY—University of Virginia Medical School, December 10, 9:00 A.M.-5:00 P.M.

EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, December 13. Dr. Joseph E. Smadel, Walter Reed Army Medical Center, "Current Problems in Virology"

TRI-STATE MEDICAL ASSOCIATION—Hotel Chamberlin, Old Point, Va., February 21-22

### A.M.A. Clinical Session.

The Eighth Annual Clinical Session of the American Medical Association will be held in Miami, Florida, November 29th to December 2nd.

The clinical sessions will be held in Dinner Key Auditorium where physicians will find ample accommodations. There is a large parking area, bus and taxi service from hotels, and an excellent restaurant as well as a snack bar. A physician may well plan to spend his entire day at the Auditorium. The lecture program includes subjects in the fields of medicine, surgery, pediatrics, neuropsychiatry, obstetrics and gynecology. Outstanding authorities from all over the country will be on the program.

The scientific exhibit will include 80 exhibits. Motion pictures will be shown continuously on subjects which will interest the physician in general practice. Color television will again be shown with programs originating from the Jackson Memorial Hospital.

Technical exhibits will also be housed in the Au-

ditorium and over 130 firms will be represented.

The preliminary program of the Miami meeting is carried in the October 30th issue of the Journal of the American Medical Association.

### Doctors Invited to Jamaica.

Members attending the AMA Interim meeting in Miami are invited to a post-convention meeting of the British Medical Association, Jamaica Branch, at Kingston, capital city of the island, on Saturday, December 4, at 10:00 A.M.

The invitation comes direct from the president and officers of the Jamaica Association, which was founded in 1877.

Jamaica is reached from Miami by airliner in a pleasant 2½ hour trip over the Gulf Stream, across Cuba and a corner of the Caribbean Sea. Following the close of the AMA meeting on Thursday, December 2, doctors and their wives could fly to Jamaica on Friday, attend the British Medical meeting Saturday forenoon, December 4, then enjoy the attrac-

tions of the popular tourist island as long as desired, returning to Miami by several daily air schedules in about three hours.

Further details will be available at Information Desks at the Miami meeting, from American Express Company and local travel agents, or from the Miami office of the Jamaica Tourist Board, 1631 duPont Building.

#### **Dr. Harvey B. Haag,**

Richmond, was guest speaker at the One Hundred Fourth Annual Session of The Medical Society of the State of Pennsylvania, October 19-22. He spoke on Pharmacology of Tobacco.

#### **News from the University of Virginia.**

Dr. William Henry Muller, Jr., one of the leading cardiac surgeons in this country, has been appointed professor of surgery and chairman of the Department of Surgery of the School of Medicine. He comes to Virginia from the University of California Medical Center at Los Angeles, where he has been associate professor of surgery and has had charge of the Division of General Surgery for the past year and a half.

Dr. Thomas H. Hunter, Dean of the School of Medicine, has been appointed special consultant to the Public Health Service as a member of the Pharmacology and Experimental Therapeutics Study Section of the National Institutes of Health. This appointment is for three years beginning January 1955.

Four members of the medical school faculty appeared on the program of the American Roentgen Ray Society at its annual meeting in Washington, September 22-23. Dr. Vincent W. Archer spoke on "Protection of Personnel During Radiological Examinations," and Drs. George Cooper, Edward P. Cawley, and Catherine Russell conducted a refresher course on "The Systemic Mycoses".

#### **Bluefield Sanitarium Clinic.**

Dedication ceremonies upon the opening of the Bluefield Sanitarium Clinic, 525 Bland Street, Bluefield, W. Va., will be held on November 10th. Dedication ceremonies and a tour of the newly completed clinic will take place the afternoon of the 10th and clinical exhibits will be displayed by the staffs of the Bluefield Sanitarium, Stevens Clinic and Clinch Valley Clinic.

These are as follows: Neuro-Surgical Problems by

Dr. E. L. Gage; Diabetes by Dr. K. E. Weier; Fungus Diseases of the Lung by Drs. V. L. Kelly and H. F. Warden; Myeloid Metaplasia by Dr. H. F. Warden; Foreign Bodies of the Esophagus and Lung by Dr. A. J. Payne; Detachment of the Retina by Drs. F. D. White and C. F. Johnston; Chest X-Rays in Silicosis by Dr. S. G. Davidson; Cytomegalic Inclusion Disease by Drs. A. J. Villani and M. W. Sinclair; Fungi in General Practice by Dr. R. C. Neale; Tumors of the Colon by Drs. W. H. St. Clair and Hampton St. Clair; Intussusception by Dr. R. S. Gatherum, Jr.; Macrocytic Anemia of Pregnancy by Dr. W. R. Wellborn, Jr.; Tumors of the Kidney by Drs. E. W. Kirby, Jr., and T. B. Baer; and Plastic Surgery of Extremities by Dr. R. R. Raub.

Following a banquet at the Bluefield Country Club, Dr. Rollin A. Daniel, Jr., Associate Professor of Surgery, Vanderbilt University Medical School, will speak on Some Aspects of Heart Surgery. Dr. Walter B. Martin, President of the American Medical Association will address the attending physicians on The Doctor, The Hospital and The Public.

#### **Dr. David N. Garner,**

Roanoke, has been appointed as chairman for the Roanoke Valley Heart Association for the 1955 fund campaign.

#### **The Stage Is Set.**

The year 1954 marks the fiftieth anniversary of the National Tuberculosis Association, the anniversary of the nationwide fight against tuberculosis in the United States. The campaign against tuberculosis as conceived by the founders of the National Tuberculosis Association is nationwide in scope but the basic unit is the local, self-governing tuberculosis association. The local associations work together in democratically constructed state associations. The National Association serves the state and local associations, coordinates their efforts, and carries on those responsibilities which can be handled by a national body.

. . . We need to improve further our overall program of tuberculosis control in which official and voluntary agencies join in a concentrated, cooperative effort. Such a program includes:

Greater efforts to find all cases of tuberculosis.

Greater efforts to make the best techniques of modern TB treatment readily available to all patients.

Greater efforts to build up resistance of people to tuberculosis infection.

This then, is the program for tuberculosis control in this country.

It is difficult—it is ambitious. It is necessary. . . . The stage is set for total victory. There must be no faltering at this critical point

#### BUY AND USE CHRISTMAS SEALS.

#### Hurricane "Carol" and Drs. Jennings.

Drs. Thomas and Eileen Jennings, Bedford, were on vacation at their summer home in W. Barrington, R. I., when Hurricane "Carol" struck that area. They have returned to their home minus their car. The two doctors helped in the evacuation of residents and Dr. Tom Jennings was sent on an emergency call to a woman who had a heart attack. In the short time that he was in the house, his car was submerged up to the roof and salt water ruined it irreparably. They escaped personal injury and only the basement of their home was flooded.

#### Parke, Davis to Replace Medicines.

Parke, Davis & Company will replace without charge all Parke-Davis products damaged or destroyed by the recent hurricane and flood tide in retail and wholesale drug firms throughout New England. Scores of drug stores in the storm area were damaged and representatives of this Company will aid the druggists in taking inventory of their stocks.

#### Dr. C. S. Lentz,

Recently of Arlington, is now located at 258 Capital Ave., N. E., Battle Creek, Michigan. He is Hospital Consultant, Health Office, of the Federal Civil Defense Administration which has moved its offices to Battle Creek.

#### Dr. Samuel A. Kirkpatrick

Has completed a residency in obstetrics and gynecology and has opened his office in the Professional Bldg., Portsmouth.

#### Representative for J. B. Roerig Company.

Mr. Hugh Paylor has recently been appointed medical service representative for the J. B. Roerig Company in Richmond.

#### Dr. Joseph E. Barrett,

Richmond, was elected president of the Southern Psychiatric Association at its recent meeting in Louisville, Ky.

#### The Seaboard Medical Association

Will meet in Wilson, N. C., November 14-16,

under the presidency of Dr. Edwin A. Rasberry, Jr.

On the opening day there will be an open house and buffet from 12:30 to 3:30 P.M., at the Wilson Country Club and that night there will be an informal reception and the President's Dinner for Guests.

On Monday, the following scientific program will be presented: Simplified Classification of Functional Diseases for Treatment Purposes by Dr. J. T. Ransone, Newport News; Surgical Treatment of Common Vascular Disorders by Dr. Ralph Deterling, New York; Heart Disease in Pregnancy by Dr. James Woods, Chapel Hill, N. C.; The Treatment of Angina Pectoris by Dr. Edward Orgain, Durham, N. C.; The Management of Chronic Glomerulo Nephritis by Dr. Guy W. Daugherty, Rochester, Minn.; Medical Care of Acute Poliomyelitis by Dr. R. Cannon Eley, Boston, Mass.; a panel on Management of Hypertension; The Diagnosis of Brain Tumors in Children by Dr. James L. Thomson, Norfolk; Diaphragmatic Hernia with Particular Reference to the Problems of the Hiatus Hernia by Dr. Vince Moseley, Charleston, S. C.; The Surgical Management of Gallbladder Disease by Dr. Lloyd Stevens, Philadelphia; The Concept of the Psychosomatic Process by Dr. George Ham, Chapel Hill, N. C.; Analysis of the Results of Conservative Therapy in Peptic Ulcer Patients by Dr. Grier Miller, Philadelphia; The Cause and Drug Therapy of Parkinson's Disease by Dr. Thomas Fleming, Nutley, N. J.; and a panel on The Management of Peptic Ulcer.

The program for Tuesday morning will be: Extradural Hematoma of the Posterior Fossa by Dr. Armando R. Coppola, Newport News; Experiences with Femoral Head Replacement by Metal Prosthesis by Dr. George Hollins, Jr., Norfolk; The Medical Management of Hyperthyroidism by Dr. Ernest Yount, Winston-Salem, N. C.; Modern Day Treatment of Malaria by Dr. Ralph Jones, Philadelphia; Recent Developments in the Treatment of Severe Liver Disease by Dr. John Sessions, Chapel Hill, N. C.; and a panel on Recent Advances in Antibiotic and Chemotherapy.

Dr. James M. Habel, Jr., Suffolk, is secretary-treasurer of this Association.

#### The American Board of Physician Medicine and Rehabilitation

Will hold its next examinations in Philadelphia,



June 5-6, 1955. The final date for filing application is March 1st. Applications for eligibility to the examinations should be mailed to the secretary, Dr. Earl C. Elkins, 30 N. Michigan Ave., Chicago 2, Ill.

#### **For Sale.**

My home with attached office on Queen's Creek in Mathews County. Nine rooms with three baths. Boat dock and double garage. Office suitable for guest wing. Desirable location for dentist. Reasonably priced. Can be financed. Dr. H. L. Shinn, Hallieford, Virginia. Phone—Matthew 5-3441. (*Adv.*)

#### **For Rent.**

Excellent opportunity for physician just outside Washington in expanding community of Alexandria. Complete 5-room house available for use as office

in area needing services of a physician. Owners willing to assist doctor in getting started. Telephone Mr. Charles Gerstein, Temple 6-9378, Washington, D. C., for appointment. (*Adv.*)

#### **Desires Location.**

General physician, qualified in surgery, age 31, to be released from Army, February 1955. Desires to associate with another physician or small group in Virginia town of 5,000-20,000. For details write Box 200, Virginia Medical Monthly, Box 5085, Richmond 20, Va. (*Adv.*)

#### **For Sale.**

Complete office equipment, including fluoroscope, two sterilizers, metabolism machine, etc., in excellent condition. Owned by general practitioner, recently deceased. Contact Mrs. J. Edward Amiss, Altavista, Va. (*Adv.*)

---

## OBITUARIES

---

### **Dr. George Woodford Brown,**

Former Superintendent of Eastern State Hospital, died at his home in Williamsburg on October 8th, having been in ill health for some time. He was eighty-five years of age and graduated from the College of Physicians and Surgeons, Baltimore, in 1893. In 1911 Dr. Brown was appointed superintendent of Eastern State Hospital and held that post for thirty-two years. During that time, five fireproof buildings were built at the hospital in Williamsburg and eight at the new Dunbar site. Dr. Brown had been active in community affairs and was a member of the American Psychiatric Association. Since 1918 he had been a member of the Governor's advisory board for mental hygiene. He was a Life Member of The Medical Society of Virginia, having joined in 1894. Two daughters survive him.

### **Dr. Edward Arthur Delarue,**

Well known Richmond physician, died September 19th of coronary thrombosis. He was forty-seven years of age and received his medical degree from the University of Virginia in 1937. Dr. Delarue was a member of the faculty of the Medical College of Virginia and taught in the cardiology clinic at the College and also at McGuire Hospital. During World War II, he was an original member of the Forty-fifth General Hospital, serving with the rank

of Captain. Dr. Delarue had been a member of The Medical Society of Virginia for seventeen years. His parents and a sister survive him.

### **Dr. Albert T. Young,**

Alexandria, died August 21st after a long illness. He was seventy years of age and a graduate of the Maryland Medical College in 1905. Dr. Young had been a member of The Medical Society of Virginia since 1918. His wife survives him.

### **Dr. Eugene William Senter,**

Prominent physician of Salem, died September 20th after a brief illness. He was forty-eight years of age and a graduate of the Medical College of Virginia in 1932. Dr. Senter served as the first full-time city physician of Roanoke before starting practice in Salem in 1937. He was a member of The Medical Society of Virginia. His wife and two children survive him.

### **Dr. George Hunter Long,**

Luray, died October 3rd. He was sixty-seven years of age and a graduate of the Medical College of Virginia in 1910. Dr. Long had been a member of The Medical Society of Virginia for several years.

### **Dr. Hansbrough.**

On July 5, 1954, this society and community sustained an irreparable loss by the untimely death of

Dr. Lyle Jamesson Hansbrough, while at the height of his medical career.

Dr. Hansbrough was a native of Warren County, having been born in Front Royal, May 14, 1911. He was the third generation of his family to serve this community as an out-standing physician. He graduated from R.M.A. and V.M.I. and received his medical degree from the University of Virginia in 1936. He also served his internship and surgical residency there. He was resident surgeon at The Good Samaritan Hospital in Cincinnati, Ohio, and was a member of American College of Surgeons.

In 1943, he started in the practice of surgery in Front Royal. His out-standing skill as a surgeon and diagnostician was immediately recognized. He never spared himself in his devotion to his profession and held himself, as well as those with whom he worked to the highest standards of the profession. He placed the practice of medicine in this community on a higher level than had ever before been possible. The small local hospital was soon out-grown. It was he who took the necessary initiative to start the plans for the new Warren Memorial Hospital.

With him the patient was placed first. Dr. Hansbrough was always approachable, understanding and inspired the confidence and the devotion of his patients and those who worked with him. He had an amazing feeling for true values. His knowledge and skill in surgery were so comprehensive, that his local colleagues found assistance in every type of situation and emergency, even outside the field of his specialty.

The doctors and people of this community have had a great blessing in his eleven short years of work here. His memory will always be cherished.

We would express our deepest sympathy to his wife, five sons, and mother in their great loss.

NORTHERN VIRGINIA MEDICAL SOCIETY

### Resolution on Dr. Hubbard.

On June 29, 1954, Dr. James Fillmore Hubbard of Waynesboro, crossed the river to meet his master.

He was 78 years old having been born in York County on December 5, 1875. He was educated by private tutors until he entered the University College of Medicine at Richmond from which he graduated in 1908. He subsequently established himself at Schuyler where he practiced until he entered the Army during World War I. After his discharge from the Army, he located at Avon in Nelson County. In 1921 he moved to Waynesboro and was in active practice up until a few days before his death.

His first thought was for his patients. He was never the first to lay the old aside or the last to adopt the new. He was held in high esteem by his fellow practitioners and his consultants. When others were anxious to limit night office hours, he insisted upon keeping them because he felt that it was necessary in order to adequately and properly serve his patients.

He will long be remembered by all who knew him, and especially those he attended, as a loving, sympathetic, kindly individual who exemplified in every respect the complete physician. In spite of many episodes of illness in recent years, he refused to retire and continued to serve his fellow man.

He was preceded in death by his wife, Edmonia Douglas, and is survived by a son, Fillmore, and one daughter, Mrs. Douglas Norris.

BE IT RESOLVED that the above resolutions be spread upon the minutes of the Waynesboro Community Hospital and the minutes of the Augusta County Medical Society and that copies be sent to members of the family and the Virginia Medical Monthly.

C. L. SAVAGE, M.D.

### Resolution on Dr. Morton.

Dr. Heber J. Morton of Stuarts Draft passed on to his reward on Tuesday, August 10, 1954. This genial physician will long be remembered by his friends and associates.

He was a past president of the Augusta County Medical Society. He was always interested in the welfare of his patients and his profession. No greater tribute can be paid than the editorial which appeared in the *Waynesboro News Virginian* on Wednesday, August 11, 1954:

"It is with considerable sorrow that we record the passing of Dr. Heber J. Morton, practicing physician in Augusta County for 22 years, several in Waynesboro and the remainder in Stuarts Draft. 'Doc', as most of us realize, suffered serious illness for many years. He fought the advances of the disease courageously and endured its mental torture and physical pain with inspiring patience and nobility.

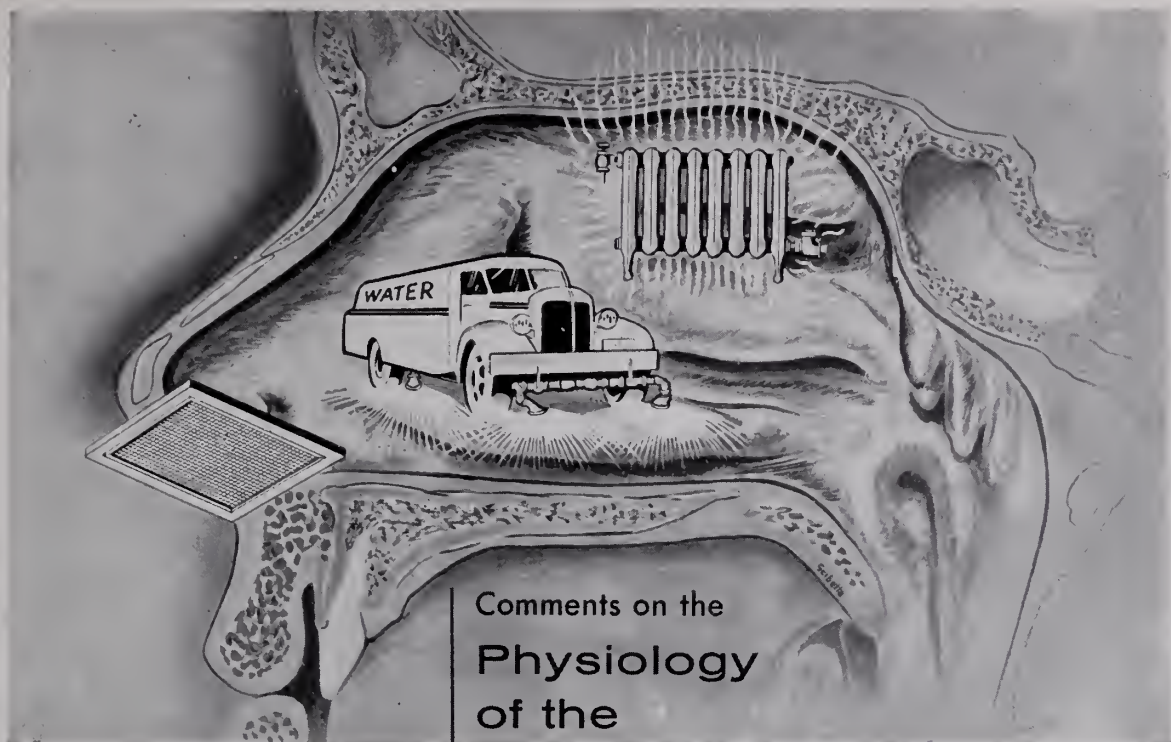
"He devoted his life, *not* to self-sympathy, but to unselfish attention to the ills and ailments of others. He was a true exponent of the philosophy of Hippocrates who held that service to mankind was the highest dedication of a physician. Dr. Morton always responded, night or day, to an appeal to alleviate suffering.

"'Doc' was a sympathetic, friendly, genial soul. His many friends are bowed deep in grief at his death. But no individual dies whose memory lives. Certainly the memory of this rugged, doughty, kindly individual will not be obliterated and, just as certainly, his interest in and service to others remains his dominant passion, as he steps over the threshold of eternity."

He is survived by his widow and two sisters.

BE IT RESOLVED that these resolutions be spread upon the minutes of the Staff of the Waynesboro Community Hospital and in the minutes of the Augusta Medical Society and that copies be sent to his family and the Virginia Medical Monthly.

C. L. SAVAGE, M.D.



## Comments on the Physiology of the Upper Respiratory Tract

### THE NASAL CAVITY:

The main functions of the nasal cavity are conditioning and exchanging air between the atmosphere and the lungs, as well as smelling. Gross impurities are removed by the fine nostril hairs, and finer impurities are enveloped in the mucous secretion of the intranasal lining and carried away by ciliary action. The air is warmed to a degree approaching body temperature and humidified. About 500 cc. of air are taken in during an ordinary inspiration, totaling 12,000,000 cc. daily.

**In the common cold . . .** when hypersecretion and mucosal swelling interfere with the normal aeration pattern, when abnormal mouth breathing is resorted to as a distress measure, relief can be obtained promptly with topical application of Neo-Synephrine hydrochloride. This potent vasoconstrictor is usually well tolerated — produces practically no sting or irritation on application to mucous membranes — even in infants.

## NEO-SYNEPHRINE® hydrochloride



*Winthrop-Stearns* INC.  
NEW YORK 18, N. Y. WINDSOR, ONT.

0.25% Solution  
0.5% Solution  
0.25% Solution (Aromatic)  
1% Solution  
0.5% Jelly  
0.25% Emulsion

Nasal Spray  
*Plastic, unbreakable,  
leakproof squeeze bottle;  
delivers fine even mist.*

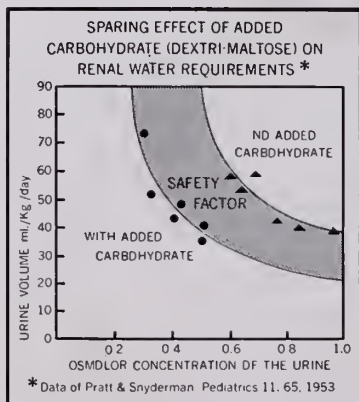
Neo-Synephrine (brand of phenylephrine), trademark reg. U.S. Pat. Off.



# DEXTRI-MALTOSE

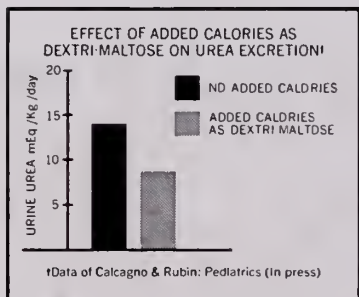
*formulas*

**provide important  
physiologic safeguards**



**Added renal safety.** When the effective carbohydrate, Dextri-Maltose®, is added to cow's milk formulas, the infant's water requirements are reduced. This provides an added margin of safety against dehydration. In addition, the load on the water excretory capacity of the infant's immature kidneys is reduced.<sup>1,2</sup>

The margin of renal safety is especially important since various stresses and handicaps have been shown to influence the infant's fluid balance and renal capacity.<sup>1,3,4,5</sup>



**Better nitrogen retention.** The addition of adequate carbohydrate (Dextri-Maltose) to cow's milk formulas increases the infant's nitrogen retention and promotes the efficient use of nitrogen for growth,<sup>2</sup> causing a reduction in the excretion of urea and lightening the load on the infant's kidneys.

Ample carbohydrate is provided in a milk and water mixture by inclusion of 4 to 5% of Dextri-Maltose—or 1 tablespoonful to each 5 or 6 fluid ounces of formula.

With a record of forty-three years of outstanding clinical success, no other carbohydrate has earned such world-wide acceptance and confidence in its constant dependability as Dextri-Maltose.



1. Pratt & Snyderman: Pediatrics 11: 65, 1953; 2. Calcagno & Rubin: Pediatrics (in press); 3. Calcagno, Rubin & Weintraub: J. Clin. Investigation 33: 91, 1954; 4. Cooke, Pratt & Darrow: Yale J. Biol. & Med. 22: 227, 1950; 5. Gamble: J. Pediatr. 30: 488, 1947; 6. Rappaport: Am. J. Dis. Child. 74: 682, 1947.

## DEXTRI-MALTOSE

the carbohydrate of choice for infant formulas

# VIRGINIA MEDICAL MONTHLY

## *Contents*

- Papillary Tumor of the Rectum, Saul Kay, M.D., Herbert C. Lee, M.D. . . . 573
- Diagnosis and Treatment of Lesions About the Optic Chiasm, Winchell  
McK. Craig, M.D. . . . 582
- Specific Drug Therapy in the Treatment of Pulmonary Tuberculosis,  
Lee B. Brown, M.D. . . . 588
- Treatment of Generalized Cryptococcosis with 2-Hydroxystilbamidine, M.  
Richard Whitehill, M.D., and Arnold J. Rawson, M.D. . . . 591
- Periarthritis Nodosa Accompanied by Sarcoid-like Histopathological  
Changes, Charles W. Whitmore, M.D. . . . 595
- Physical Medicine for the General Practitioner, Leonard D. Policoff, M.D.,  
and Herbert W. Park, M.D. . . . 598

(Continued on page 6)

ACADEMY  
OF MEDICINE

DEC - 7 1954

consider

**ILOTYCIN**  
(ERYTHROMYCIN, LILLY)

**FIRST**

**... because its  
antibiotic  
spectrum is  
unexcelled**

'Ilotycin' is effective against over 80 percent of all bacterial infections;  
yet the bacterial balance of the intestine is not significantly disturbed.

*Lilly*

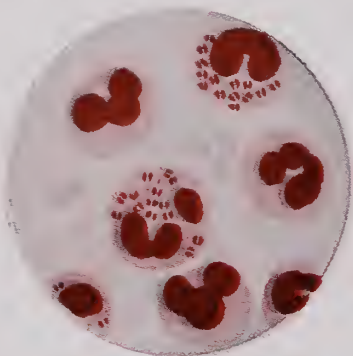
# from the literature...

"The value of **CHLOROMYCETIN** in the treatment of infections due to most bacteria, the pathogenic rickettsiae, and many of the large viruses has now been well established."<sup>1</sup>



## in typhoid fever

"Our experience...and many others all show that chloramphenicol [**CHLOROMYCETIN**] has an established place in the treatment of typhoid fever."<sup>2</sup>



## in meningitis

"At the present time chloramphenicol [**CHLOROMYCETIN**] is recognized as a potent antibiotic whose ease of administration and prompt diffusion into serum and spinal fluid makes it a particularly useful agent in the treatment of many forms of purulent meningitis."<sup>3</sup>

# Chloro

(1) Yow, E. M.; Taylor, F. M.; Hirsch, J.; Frankel, R. A., & Carnes, H. E.: *J. Pediat.* **42**:151, 1953. (2) Dodd, K.: *J. Arkansas M. Soc.* **10**:174, 1954. (3) Hanbery, J. W.: *Neurology* **4**:301, 1954. (4) Miller, G.; Hansen, J. E., & Pollock, B. E.: *Am. Heart J.* **47**:453, 1954. (5) Keefer, C. S., in Smith, A., & Wermer, P. L.: *Modern Treatment*, New York, Paul B. Hoeber, Inc., 1953, p. 65.



# Virginia Medical Monthly

Vol. 81, No. 12  
WHOLE No. 1230

RICHMOND, VA., DECEMBER, 1954

\$2.00 A YEAR  
25 CENTS A COPY

## PAPILLARY TUMORS OF THE RECTUM\*

SAUL KAY, M.D.,  
HERBERT C. LEE, M.D.,  
Richmond, Virginia

The stimulus to review our experiences with papillary lesions of the rectum stems from Sunderland and Binkley's<sup>1</sup> most thorough review in 1948. Since this date, surprisingly little information has accumulated in the literature concerning these growths though they have long been known and studied in prior years.

### DEFINITION OF TERMS

The lesion in question has appeared under a variety of names: papilloma, villous papilloma, papillary polyp or adenoma, columnar or mucous papilloma, and villoma. It is best known by the French, who are particularly interested in this tumor, as "les tumeur villeuses du rectum". Our personal preference is for papillary adenoma—the term used by Sunderland and Binkley—for reasons that it is descriptive in the microscopic pathologic sense, and implies that both glandular formations as well as papillary structures are present within the tumor. Few neoplasms of this type are purely papillary, and those that are purely glandular had best be named adenomatous polyps.

The term papillary adenoma is used only for those lesions which are entirely benign by microscopic standards. The malignant varieties can be further subdivided into those showing merely intramucosal changes characteristic of malignancy, and those showing unequivocal evidence of malignancy characterized by penetration of neoplastic glands through the muscularis mucosa. These may conveniently be termed intramucosal carcinoma (papillary adenoma type) and carcinoma (papillary adenoma type) respectively. The first and third categories present no problem in microscopic diagnosis, but differentiation between the first and second may depend a great deal on personal equation and patho-

logic criteria. In general, we have used the criteria of malignancy as laid down by Sunderland and Binkley.

### REVIEW OF MORE RECENT LITERATURE

Binkley *et al.*, in 1949,<sup>2</sup> published further experiences with this tumor. They subdivided the lesions into small and large varieties, using 4 cm. as the dividing line. They defined the radical and conservative approach for treatment, the conservative consisting only of local removal and preservation of sphincter control. The radical procedure involved surgical resection with or without continuity of bowel, and the highest salvage rate occurred in patients having procto-sigmoidectomy when no carcinoma was present. This method, however, did not always insure good sphincter control.

In the same year d'Allaines, Dubost and Fournier<sup>3</sup> thoroughly discussed various methods of treating villous tumors. They subdivided the lesion into four categories, viz., non-malignant, malignant, suspected malignant, and recurrent tumors. For the non-malignant growths, local excision through the anal canals was recommended for tumors of moderate size, with a base no more than 3 cm. and located not over 10 cm. above the anal margin. The excision must include a rim of normal mucosa at least 2 cm. around the tumor. This procedure is especially well-adapted in elderly patients and those in poor general condition. Resection of the rectum by a sacral approach was advised for tumors 8-15 cm. above the anal margin where local excision was not feasible, and for lower lesions which were more extensive than described above, as to circumference, height, and size of the base. This procedure is easily withstood in the aged and insures normal continence. The combined abdomino-sacral resection of the rectum was occasionally recommended for large, bulky tumors in the relatively young patient in good physical con-

\*From the Department of Surgical Pathology and Department of Surgery, Medical College of Virginia, Richmond, Virginia.

dition. Interstitial radiotherapy was likewise curative, but follow-up with this method had not been completely evaluated. It might be useful in the very old patient and in patients who can tolerate no surgery whatsoever. Definitely malignant tumors should be treated as any carcinoma of the rectum, and in general this also holds true for clinically suspicious growths. For very low lesions, these suspicious tumors might be locally excised through the anus, and thoroughly studied microscopically. If found to be benign, nothing further need be done. For recurrent tumors, more radical surgery than previously employed is certainly justifiable, and removal of the rectum by the combined approach is most often necessary.

In 1950, Burns<sup>4</sup> presented nine papillary lesions of the colon and rectum, of which six were in the rectum. He stated that malignant degeneration takes place in 40% of cases, and stressed the high rate of local recurrence. Total local excision of rectal lesions, including normal adjacent tissue about the base, was the treatment of choice if no invasion was present no matter what the cytology revealed. This, of course, would imply prior knowledge of absence or presence of invasion by biopsy at the proper site—a procedure not always possible.

This year also furnished a very thorough and illuminating discussion by Ewing<sup>5</sup> of the subject of villous tumors. The author elaborated on the clinical criteria of malignancy (induration, ulceration and fixation) *versus* the histological criteria (anaplasia, irregularity of architecture and frequency of mitoses) in the absence of invasion. He found clinical criteria more valuable and advised against the more radical procedures solely on the basis of these histologic criteria. For benign uncomplicated lesions, simple local excision was advised, the approach dependent on the site of the tumor. As also advised by d'Allaines *et al.*, Ewing urged removal of a collar of normal mucous membrane surrounding the lesion. If the tumor cannot be removed from below, the abdominal approach should be used, and simple excision or bowel resection utilized. The lesion should be treated like any carcinoma, if it is clinically malignant or biopsy reveals invasion of pedicle. If only intramucosal changes suggestive of malignancy are present, additional biopsies might be justified, but treatment should ultimately be on the conservative side if nothing further can be gleaned from the subsequent biopsy material. The author con-

cludes that there is no clear-cut distinction on pathologic grounds between the adenoma and villous tumor, the former tending to evolve into the latter. The retention of the term villous tumor and its consideration as a separate entity is justified only by convenience to the clinician.

Two years later, Gabriel,<sup>6</sup> in a discussion of large villous tumors of the rectum, stressed the fact that the larger lesions are usually more extensive than a clinical evaluation would lead one to believe. He emphasized the difficulty of excluding a malignant change pre-operatively, and advised examination under anesthesia to better evaluate the tumor for therapy, and to secure more adequate biopsies if these were deemed necessary. This author also thought the radical combined procedure best for larger lesions.

In 1952, Snellman<sup>7</sup> presented five cases of diffuse papillomatosis of the rectum, and considered the lesion definitely pre-cancerous though none displayed the histologic evidence of malignancy. He enumerated the various types of operative procedures which might be used as follows: 1. Abdomino-perineal resection with permanent colostomy. 2. Excision of the rectum followed by a "pull-through" procedure—(this does not insure complete continence). 3. Abdomino-sacral resection of the rectum which gives good sphincter control but may be followed by fistula formation. 4. Abdomino-anal resection which gives good sphincter control if the distal 3 cm. of rectum is spared. Four of the five cases presented had this last procedure, allowing a portion of the rectum readily accessible to future inspection, and possibly local treatment with diathermy should local recurrence supervene.

More recently Ryan<sup>8</sup> and Lucas<sup>9</sup> studied villous tumors below and above the peritoneal reflection respectively. Ryan presented six cases which were apparently benign, and recommended either local excision by pulling the lesion out through the anus, or Beven's procedure incising the posterior sphincter and levator muscles, and thus exposing the rectal ampulla. Lucas discussed five cases also apparently benign. He stated that when malignancy occurs it is slow in appearance and invasion, and remarkably late in metastases. For these higher type lesions, he advised anterior resection and anastomosis when possible, resection and pull through, or resection of sigmoid, rectum and anus.

The following six cases concern our experiences



with tumors of the rectum. Five of these have come under our observation since 1950. This represents the year when special efforts were made to file lesions under the caption of papillary adenoma so that they may be easily found for future reference. An additional case was discovered fortuitously in the files of 1947. Undoubtedly more tumors of this type were observed at this institution but have become lost under the general heading of carcinoma or adenomatous polyp.

*Case 1.<sup>a</sup>*—V.B.L., a 75-year old white woman, was admitted to the hospital on February 18, 1947, complaining of painless rectal bleeding of three months duration. There was no weight loss, diarrhea or change in bowel habitus, and her general health was good. She had recently consulted a private proctologist who found a lesion on the posterior wall of the rectum. This was biopsied and found to be a malignant tumor. The physical examination and laboratory findings were essentially negative. On the 8th hospital day, the coccyx was resected and local excision of the tumor carried out. The tumor was near the anorectal junction, measured 2 by 1 inches in diameter, and was papillary in type. It was excised with a 3/8 inch margin of normal mucosa. She was last seen by her surgeon July 21, 1954, 7½ years following her surgery. There was no complaint relative to the rectum, and there was no evidence of recurrence.

**Pathological findings:** Gross: (S-47 788). The specimen consisted of a piece of papillary tumor tissue, 3 cm. in greatest diameter. A portion of coccyx bone was attached to the specimen.

**Microscopic:** Section showed full thickness rectal wall with a mixed papillary and glandular tumor replacing a major portion of the mucous membrane (Fig. 1). Because of the poor orientation of the specimen, it was difficult to be absolutely certain whether or not invasion into the submucosa was present. Nevertheless, distinctly atypical areas were seen to warrant a diagnosis of malignancy.

**Diagnosis:** Intramucosal (?) carcinoma (papillary adenoma type) of rectum.

*Case 2.<sup>b</sup>*—R. L., a 63 year old white man, was admitted to the hospital division of the Medical College of Virginia on November 9, 1950, complaining of a mass protruding from the rectum during defecation. This was first noticed three months

prior to admission, and relief was obtained by replacing the mass by digital manipulation. There was slight rectal bleeding. Protrusion followed by replacement recurred several times later. In addition, there was an alteration in bowel habitus during the past two months, associated with an eight pound weight loss and anorexia.

The past history revealed that the patient was

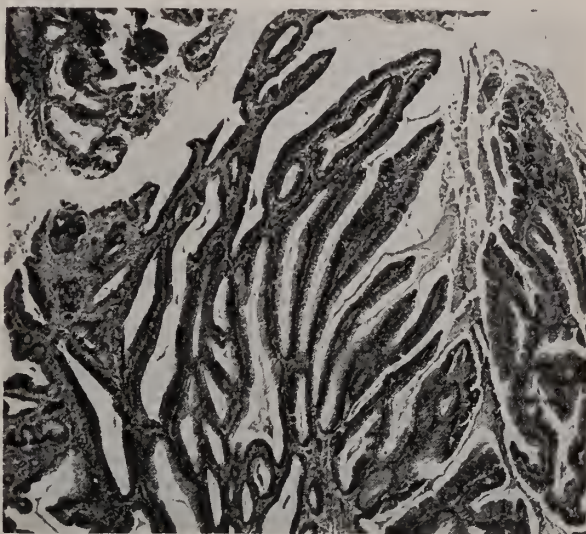


Fig. 1.—Case 1. The papillary features of the neoplasm are shown.

taking digitalis and ammonium chloride for mild cardiac decompensation. He had had hemorrhoids for as long as he could remember.

Physical examination revealed a villous tumor on the posterior wall of the rectum close to the anorectal line. The patient was fibrillating and thought to have arteriosclerotic heart disease.

Laboratory examination showed elevated blood sugar levels consistent with mild diabetes. Other findings were essentially normal.

On the 5th hospital day, the patient was operated upon under low spinal anesthesia. The base of the lesion could be delivered to the anorectal line, and the lesion was locally excised without cutting through the wall of the bowel. The patient was discharged three days later after an uneventful recovery. He was last seen by his physician on March 24, 1953, at which time he was symptom-free, without evidence of recurrence.

**Pathologic findings:** Gross (S-50 6283) The specimen consisted of a piece of rectal mucosa and submucosa 6.5 by 5 by 2 cm. The mucosa presented many finger-like projections (Fig. 2). There was

a—Courtesy of Dr. Carrington Williams.

b—Courtesy of Dr. C. C. Chewning.



smooth mucous membrane, however, at one end of the specimen.

**Microscopic:** The tissue consisted of mucosa and submucosa of the colonic type with only a small portion of underlying smooth muscle in one area. The mucous membrane was replaced almost entirely by a diffuse papillary and glandular neoplasm, which in several places was distinctly malignant. The papillae and glands were lined by tall columnar epithelium containing atypical darkly-staining nuclei, which were often stratified. In the malignant areas the nuclei were bizarre and there was increased mitotic activity up to 4 per high power field. There was no infiltration beneath the muscularis mucosa in any of the sections taken. The tumor very closely approached the margins of the excision in several areas, so that it was unlikely that complete excision had been accomplished.

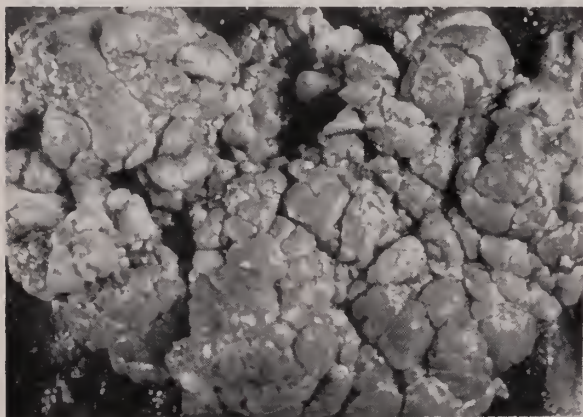


Fig. 2.—Case 2. Gross features of rectal neoplasm showing extensive lobulation and finger-like projections.

**Diagnosis:** Intramucosal carcinoma (papillary adenoma type) of rectum.

**Case 3.**<sup>c</sup>—M.M., a 76-year old white woman, was admitted on September 25, 1951, with complaints of rectal bleeding of unknown duration. There was also noted rectal incontinence with passage of liquid feces mixed with blood. Rectal examination revealed poor sphincter tone, and a large polypoid mass, attached by a wide base, two inches above the anal orifice. Following a biopsy of the lesion (see pathology report below) an abdomino-perineal resection was performed on the eighth hospital day. The post-operative course was uneventful and the patient was discharged November 5, 1951, with a satisfactory colostomy. She was last seen by her

physician on April 20, 1954, when there was no evidence of recurrence. There was, however, some induration at the posterior fornix.

**Pathologic findings:** Gross (biopsy specimen S-51 5664) The specimen consisted of numerous small fragments of soft tissue, the largest 1.5 cm. in diameter. The latter fragment was a round, soft, nodule, reddish-brown and friable. It showed many papillary excrescences on the surface.

**Microscopic:** Section showed multiple papillae of colonic type mucous membrane, the papillary structures lined generally by normal appearing epithelium with abundant goblet cells. In some instances, however, the epithelium was distinctly atypical, and there were darkly staining, stratified nuclei. In addition, there was noted a large piece of tissue with definitely infiltrating, glandular carcinoma with some papillary formation.

**Diagnosis:** Carcinoma (papillary adenoma type) of rectum.

**Gross:** (major specimen S-51 5833) The specimen consisted of two pieces of large intestine previously fixed in formaldehyde, so that considerable distortion of tissue was present. One of the specimens was a terminal segment of colon, including rectum, anus and perianal skin. A polypoid tumor mass was identified about 10.5 cm. above the pectinate line and measuring approximately 7 cm. in the long axis of the bowel. The tumor was soft, freely movable and extended into the lumen for about 8 mm. In its partially fixed state, it had somewhat the appearance of a porcupine (Fig. 3). The other seg-

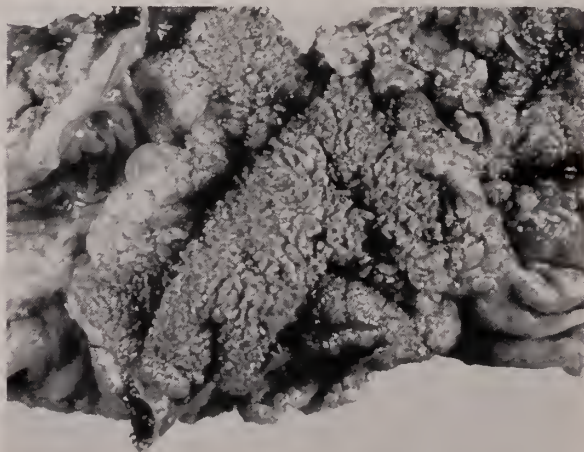


Fig. 3.—Case 3. Typical gross features of villous tumor.

ment of bowel was 13.5 cm. in length and showed merely a small adenomatous polyp, 1 cm. in maxi-

<sup>c</sup>—Courtesy of Dr. R. A. Michaux.

mal diameter.

**Microscopic:** The lesion in the rectum was a papillary neoplasm composed of long, thin, delicate stalks surmounted by columnar epithelium (Fig. 4). This epithelium was often slightly atypical, with crowding and stratification of nuclei. Nowhere did the lesion infiltrate beneath the muscularis mucosa (Fig. 5). The lymph nodes removed from the mesentery of the sigmoid showed no evidence of metastatic growth.

**Diagnosis:** Intramucosal carcinoma (papillary adenoma type) of rectum; polyps (adenomatous type) of sigmoid colon.

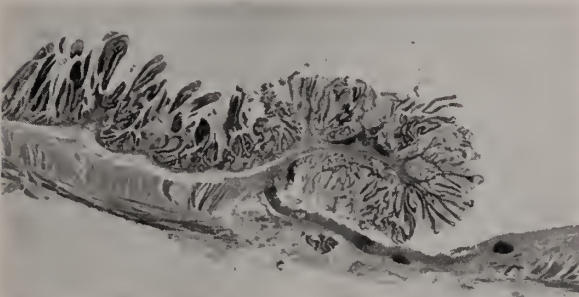


Fig. 4.—Case 3. Low power view to show papillary excrescences without penetration beneath muscularis mucosa.

**Case 4.**—M.B., a 51 year old white woman, was admitted January 23, 1952, with complaints of rectal bleeding and lumbar pain, present for approximately six months. Physical examination was essentially negative but proctoscopic showed a polypoid, fungat-

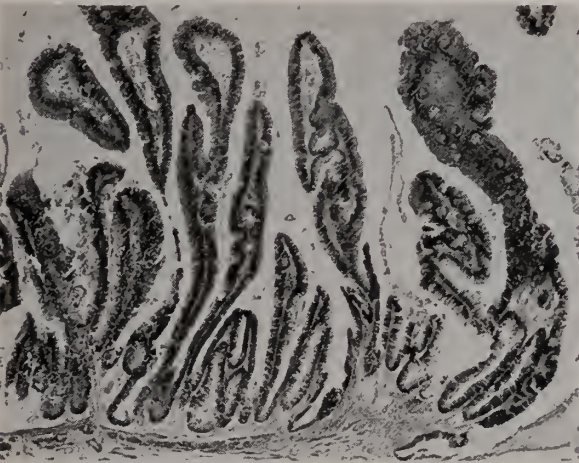


Fig. 5.—Case 3. Higher magnification of Fig. 4.

ing lesion on the anterior and right lateral wall of the rectum, just below the peritoneal reflection. This had been biopsied elsewhere and reported to represent carcinomatous changes in a polyp. X-ray studies showed multiple diverticula of the colon and some

narrowing of the rectum with retention above it. Other laboratory findings were non-contributory. The patient was operated upon on the 5th hospital day, when an abdomino-perineal resection was done. On the 20th day after this procedure, the patient was taken to the operating room, and the colostomy dilated. She was discharged on February 28, 1952, to be followed as an outpatient.

The patient was readmitted March 15, 1952, because of a watery diarrhea which had developed about 10 days after discharge from the hospital. Physical examination showed a stricture of the colostomy. This was revised two days later, following which she was discharged March 22, 1952, in good condition. She was last seen in the latter part of March, 1954, at which time there was no evidence of recurrence.

**Pathologic findings:** Gross (S-52 713). The specimen consisted of a 50 cm. piece of colon and an 8 cm. segment of lower rectum, anus and perianal skin. The colon showed numerous small diverticula. The rectum revealed a large polypoid lesion 3 x 1.5 cm. in diameter attached to the mucous membrane by a broad base. The tumor was approximately

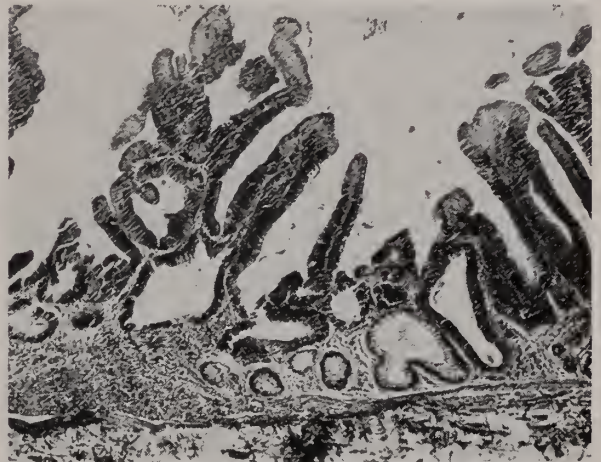


Fig. 6.—Case 4. Medium power to show papillary growth without penetration through the muscularis mucosa.

2.5 cm. above the pectinate line. The surface of the tumor was smooth, reddish-pink, and cauliflower in appearance. Adjacent to this was a rather flat, verrucous, polypoid mass, 2 cm. in diameter and 5 mm. in thickness. The surface of this was also smooth and reddish-pink. The lesion appeared to be limited to the mucosa and could be freely moved over the underlying muscular wall. About 15 cm. above the pectinate line there was a dense fibrotic mass, 2 x 1 cm., which was adherent to the posterior wall of



the upper rectum. The mucosa covering this area was normal.

**Microscopic:** Section through the rectal polypoid mass showed a papillary adenomatous type of carcinoma which was entirely intramucosal (Fig. 6). The cells comprising the tumor were hyperchromatic, pseudostratified and exhibited active mitoses averaging 3 per high power field. In some areas cell polarity was lost and many atypicalities were present. The dense, fibrotic mass involving the rectal wall was due to endometriosis.

**Diagnosis:** Intramucosal carcinoma (papillary adenoma type) of rectum.

Endometriosis of rectum.

Diverticula of colon.

**Case 5.**<sup>d</sup>—L.W., an 81-year old white man, was first seen in the private office July 22, 1952, complaining of a small amount of blood in the stools. Examination revealed a hard fungating mass on the right anterior rectal wall, which was obviously ulcerated, hard and immovable. The lower border of the lesion was 7 cm. from the anal margin and occupied approximately one-third of the circumference of the rectum. The lesion was biopsied and reported as carcinoma (papillary adenoma type (S-52 4910) (Fig. 7.) Because of the patient's

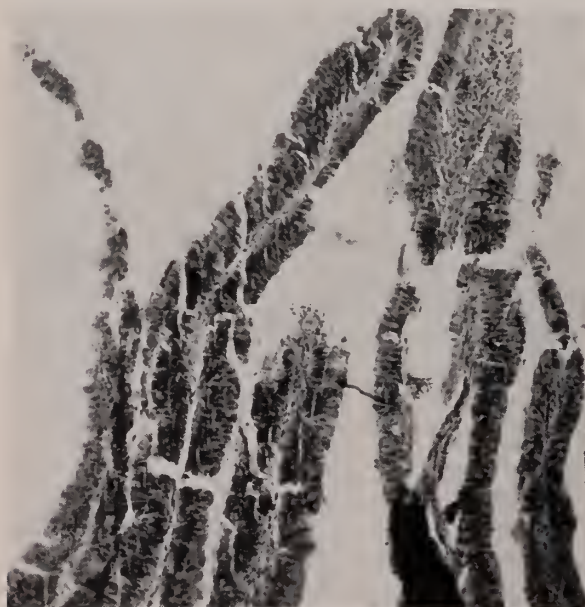


Fig. 7.—Case 5. The papillary nature of the tumor is shown.

advanced age he was advised by another physician, related to the patient, not to undertake an operative procedure. He was seen again May 19, 1954, at

<sup>d</sup>—Courtesy of Doctor G. D. Vaughan.

which time no real change of the lesion could be ascertained. Another biopsy was taken which revealed typical infiltrating carcinoma without papillary features. There has been no weight loss and the patient leads an active life, working as a farmer.

**Case 6.**—I.B., a 51 year old white woman, was admitted to the Medical College of Virginia, Hospital Division, March 17, 1954, because of a neoplasm of the rectum, accidentally discovered when she consulted her physician because of general feeling of being unwell. She had complained of intestinal discomfort and gaseous distention during the past 1½ years. There was occasional fresh blood in the stool, ascribed to hemorrhoids. The tumor was confirmed five days prior to admission, by biopsy (see pathological report below). On the third hospital day an abdomino-perineal resection was done. The patient did fairly well following this procedure, but required daily dilatation of the colostomy. She was discharged on April 23, 1954, to be followed as an out patient.

**Pathological findings:** Gross (biopsy specimen S-54 1811). The specimen consisted of eight small pieces of tissue varying in size from 4 x 3 mm. down to 1 mm. in diameter. These pieces of tissue were pink-tan and friable.

**Microscopic:** Sections showed a malignant tumor of the colonic variety characterized by long, papillary processes consisting of thin, connective tissue stalks surmounted by atypical columnar epithelium (Fig. 8). There is considerable mitotic activity and the

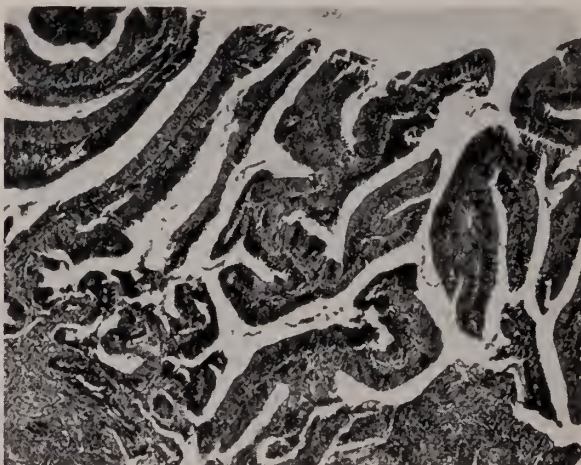


Fig. 8.—Case 6. Medium power to show papillary and malignant characteristics.

nuclei are stratified and show variations in size and shape.



Diagnosis: Carcinoma (papillary adenoma type) of rectum.

Gross (major specimen S-54 2113). The specimen consisted of a terminal segment of colon, rectum and anus and another more proximal segment of sigmoid colon. These measured 19 cm. and 11 cm. in length respectively. On the anterior wall of the rectum, and 1.5 cm. superior to the pectinate line, was a friable, papillary tumor, soft in consistency (Fig. 9). The lesion measured 4 cm. in the long axis, 3.5 cm. in the transverse axis and 1.5 cm. in thickness. The tumor was attached to the mucosa

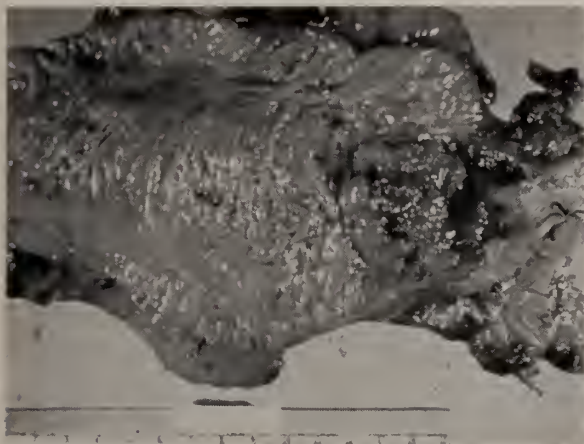


Fig. 9.—Case 6. Gross features of low-lying tumor in the rectum showing lobulated and exophytic characteristics.

but moved freely over the underlying muscular coat. The superior border of the neoplasm extended to a point 6.5 cm. below the peritoneal reflection.



Fig. 10.—Case 6. Low power view of papillary tumor confined to the mucous membrane.

Microscopic: Section showed a papillary and glandular tumor, obviously malignant, but almost entirely confined to the mucous membrane (Fig. 10).

The superficial portions of the tumor showed long papillary stalks supporting delicate vascularized stroma (Fig. 11). The epithelial cells were bizarre and the nuclei atypical and variable in size and staining quality (Fig. 12). A small island of neoplastic glands was found in the submucosa in one area—proof of actual invasion by the tumor (Fig. 13).

Diagnosis: Carcinoma (papillary adenoma type) of rectum.

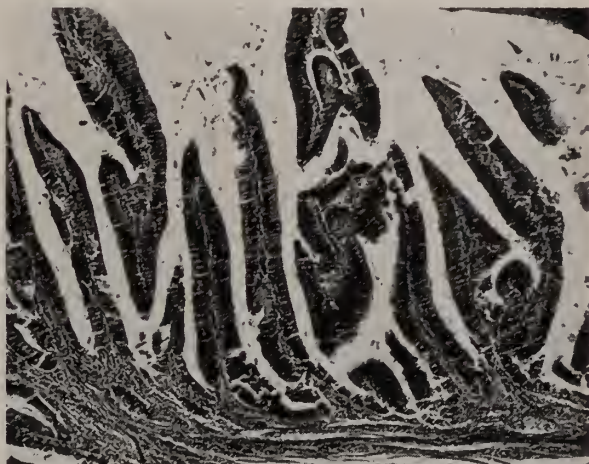


Fig. 11.—Case 6. Medium power view of Fig. 10.

#### COMMENT

Because of the short follow-up periods on most of these reported cases, nothing but cautious conclusions can be drawn on the ultimate prognosis. Neverthe-

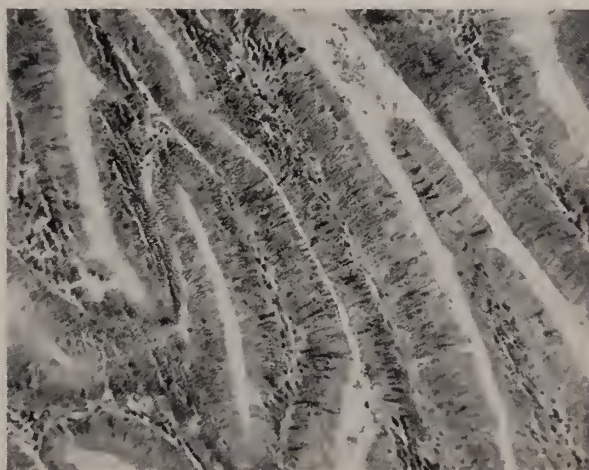


Fig. 12.—Case 6. High power view of Fig. 10 to show malignant features.

less, certain facts seem to come to light, and these will be briefly elucidated.

In keeping with Sunderland and Binkley's analysis,<sup>1</sup> the disease is an affliction of the elderly. All

of our cases occurred over 50 years of age, with extremes from 51 to 81. The impression is also gathered that, regardless of the ultimate outcome, the lesion is slow in its progression. This fact is entirely in keeping with conclusions found in the literature.

It will be noted that all cases were ultimately diagnosed as malignant, intramucosal, or infiltrating. This might be construed as over-diagnosis on the intramucosal lesions, but this seems hardly possible when it is remembered that the diagnosis of infiltrating carcinoma was made on biopsy specimens prior to major surgery when these were done.

Concerning therapy, we believe that once the diagnosis of infiltrating carcinoma is made, an abdominoperineal resection is generally the treatment of choice. One might elect to do an anterior resection with anastomosis below the peritoneal reflection for high-

examining the patient under anesthesia, is a good one to facilitate the removal of tissue from the proper area to include the base. The lower lesions might also be excised locally, as advised by D'Allaines and co-workers,<sup>3</sup> for thorough scrutiny under the microscope prior to final decision.

For lesions entirely confined to the mucous membrane, local excision by any of a number of methods might be safely employed, provided that the tumor is not of too great size to render difficult the removal of a ring of normal mucosa at least 2 cm. beyond the confines of the tumor. One cannot give an arbitrary figure of what this size should be, since so much depends on the location of the lesion, its extent on the circumference of the bowel, and whether or not it is sessile or in part pedunculated. At any rate, local removal demands a most careful follow-up of the patient in order that local recurrence may be picked up as soon as possible.

#### SUMMARY AND CONCLUSIONS

1. Six cases of papillary tumors of the rectum are presented.
2. The pathology of these growths is reviewed and a means of classification suggested.
3. In general, the papillary tumors can be divided into those that are strictly confined to the mucous membrane, and those that penetrate the muscularis mucosa to invade the deeper structures.
4. The tumors that show the severest anaplastic features histologically are more apt to also show microscopic evidence of invasion.
5. As a group the tumors are slow-growing and late to metastasize.
6. They are found in an older age group than the usual epithelial tumors of the rectum.
7. As a rule, invasive neoplasms should be treated by radical combined procedures, but local excision may be performed for strictly intramucosal growths.

#### REFERENCES

1. Sunderland, D. A., and Binkley, G. E.: Papillary Adenomas of the Large Intestine. A Clinical and Morphological Study of 48 Cases. *Cancer*, 1: pp. 184-207, 1948.
2. Binkley, G. E., Sunderland, D. A., and Miller, C. J.: Treatment of Papillary Adenomas of the Rectum. *N. Y. State J. Med.*, 49: pp. 1791-1794, 1949.
3. D'Allaines, F., Dubost, C., and Fournier, M.: Le Traitement des Tumeurs Villeuses du Rectum. *Arch.*



Fig. 13.—Case 6. Island of neoplastic glands invading submucosa of rectum.

ly-placed small lesions, or pull-through procedures for lesions at least 3 cm. above the anal sphincter. The justification for temporizing is based on the life history of the lesion, as indicated above, and by this reasoning one might choose the lesser procedures also in the very old and poor-risk patients.

Ideally, it would be important to know by preliminary biopsy whether or not one is dealing with an invasive lesion. We agree with Ewing<sup>5</sup> that the subtle changes of intramucosal malignancy are of lesser importance than the clinical criteria, and that only histologic proof of invasiveness can be accepted as an indication for radical surgery. It is indeed unfortunate that the pathologist may be unable to furnish this proof if the biopsy is not taken from the right area. The suggestion of Gabriel,<sup>6</sup> of



- Mal. App. Digest, et Mal. Nutr., **38**: pp. 1096-1114, 1949.
4. Burns, F. J.: Papillomas of Colon and Rectum. *Am. J. Surg.*, **20**: pp. 97-101, 1950.
  5. Ewing, M. R.: Villous Tumors of the Rectum. *Ann. Royal College Surg. Eng.*, **6**: pp. 413-441, 1950.
  6. Gabriel, W. B.: The Surgical Management of Large Villous Tumors of the Rectum. *Proc. R. Soc. M. London*. **45**: pp. 696-700, 1952.
  7. Snellman, B.: Diffuse Papillomatosis in the Rectum. Report of Five Cases. *Acta. Chir. Scand.*, **103**: pp. 205-212, 1952.
  8. Ryan, J. E.: Villous Tumors of the Rectum Below the Peritoneal Reflection. *Am. J. Surg.*, **86**: pp. 535-538, 1953.
  9. Lucas, M. A.: Villous Tumors of the Rectum and Sigmoid Colon Above the Peritoneal Reflection. *Am. J. Surg.*, **86**: pp. 539-544, 1953.
- 

#### Aid for Auto Chest Injuries.

A technique has been devised to aid breathing by persons whose chests have been crushed by the steering wheel in auto accidents. Three Chicago physicians reported they have "stabilized" soft chest areas and successfully solved a difficult breathing problem for such patients by the use of weighted traction applied on pins painlessly inserted in the chest.

More cars, higher speeds and "fantastic increases" in horsepower mean that more serious injuries, and a proportionate increase in chest injuries, can be expected. Such injuries now cause 20 to 25 per cent of automobile accident deaths. One of the most pressing problems in the treatment of "stove-in chest" is stabilization of the chest wall. Drs. Theodore R. Hudson, Robert T. McElvenny and Jerome R. Head, of Northwestern University Medical School and Wesley Memorial Hospital, said their technique may help solve this problem. (*J.A.M.A.*, October 23, 1954)

In such chest injuries, the normal movement of the diaphragm and ribs is disrupted when injury-softened chest areas sink in instead of expanding with each breath. This also impairs coughing, which

results in flooding of the lungs by secretions which normally would be coughed away. A vicious cycle is set up "as desperately ill patients struggle for increasing amounts of air only to find the situation made worse by their own efforts."

In minor injuries adhesive strapping is satisfactory, but for serious ones existing techniques may not be very effective. They devised a method by which the softened part of the chest is held up and out by traction, with weights suspended from an overhead frame such as that used for some fracture cases. Pins placed in the softened part of the chest wall are held by metal spreaders, or "fingers", fastened to weighted cords. The pins are placed while the patient is under a local anesthetic, and the pull of the weights is painless. The pins cause no harm to the tissues around them and leave only small pin-point scars.

Five patients have been treated by this method. Two of these patients died of other serious accident injuries, but the technique was successful in aiding their breathing. Two patients recovered completely without after-effects. A fifth patient was successfully treated in this way after the physicians wrote their report.



## DIAGNOSIS AND TREATMENT OF LESIONS ABOUT THE OPTIC CHIASM\*

WINCHELL MCK. CRAIG, M.D.,  
Section of Neurologic Surgery,  
Mayor Clinic and Mayo Foundation,†  
Rochester, Minnesota

### PITUITARY TUMORS

Pituitary tumors constitute about 10 per cent of all intracranial neoplasms that comes to operation. The commonest tumor or disease process that affects the pituitary gland and requires operation is chromophobe adenoma. This tumor not only produces changes in the roentgenogram of the head and in the perimetric fields but also produces endocrine disturbances, usually of a hypopituitary type. In addition to adenomatous tumors of the pituitary gland, there is a group of congenital tumors of pituitary origin, namely pituitary adamantinomas, which are also known as craniopharyngiomas, hypophyseal duct tumors and Rathke pouch tumors.

*Types.*—Pituitary tumors may be either hyperfunctioning, such as eosinophilic adenoma and basophilic adenoma, or nonfunctioning, which is true of chromophobe adenoma.

Eosinophilic adenoma characteristically produces the syndrome of acromegaly. In this condition the hands and feet enlarge, the head increases in size, the lower jaw becomes prominent, the teeth tend to become separated, and in the female the body tends to resemble that of the male. Menstruation may or may not cease, and the male may or may not have loss of libido and potentia. The tendency of such a tumor to expand downward and thus grow away from the optic nerves and chiasm accounts for the small number (5 per cent) that produce visual changes and require operation.

Basophilic adenoma which in some cases is responsible for the syndrome of hirsutism, the development of the buffalo type of obesity, hypertension, amenorrhea, and atrophic purplish striae of the skin in the female rarely if ever requires surgical treatment or causes changes in the perimetric fields.

Chromophobe adenoma, on the other hand, tends to destroy the normally functioning pituitary gland and to produce endocrine disturbances characterized by rather waxy pallor, diminution or loss of sexual

function and loss of beard, axillary hair and other secondary sex characteristics in the male. In the female there is usually loss of menstruation and ability to conceive. The indication for surgical treatment is pressure on the optic chiasm or optic nerve with resultant visual disturbance. Occasionally a pituitary adenoma will extend above the sella, encroach on the domain of the third ventricle and produce increased intracranial pressure before signs of visual loss occur.

*Clinical Characteristics.*—Bitemporal visual disturbance or bitemporal hemianopsia is the classic visual disturbance caused by a pituitary tumor. This occurs because the tumor breaks through the diaphragm of the sella, rises anterior to the optic chiasm and between the optic nerves, and displaces the chiasm posteriorly and the optic nerves laterally. Thus, the nasal fibers and the crossing fibers in the chiasm are compressed with the resultant loss of vision to the outer or temporal side of the field of vision.

Although bitemporal hemianopsia is the classic type of field defect, innumerable variations may occur. An homonymous visual defect may be produced when the adenoma breaks out from the sella laterally, below the internal carotid artery, and compresses one optic nerve.

Early in the development of a pituitary tumor the optic disks appear normal. If the pressure is not relieved at this stage the disks become pale, and later they lose substance and vision fails.

Roentgenologic examination of the head is most important when the presence of a pituitary tumor is suspected. In the majority of cases of pituitary adenoma, there is either enlargement of the sella turcica or enlargement and erosion of bone. In a study of 314 surgically verified pituitary adenomas at the Mayo Clinic, Love found that the sella turcica, by roentgen-ray examination, was normal in only 12 cases.

In adamantinoma, in addition to erosion or enlargement of the sella turcica there is often calcification either within the sella turcica or most often above and behind the posterior clinoid processes. In

\*Read at the Spring Congress in Ophthalmology and Otolaryngology of the Gill Memorial Eye, Ear, Nose and Throat Hospital, Roanoke, Virginia, April 5 to 10, 1954.

†The Mayo Foundation is a part of the Graduate School of the University of Minnesota.

a review of 108 cases of craniopharyngioma, Love and Marshall<sup>1</sup> found that calcification was observed in only 50 per cent of the cases.

Electroencephalograms may help in the differential diagnosis of tumors about the optic chiasm, and many neurosurgeons routinely do air encephalograms in suspected cases and feel that they are of diagnostic help. There is some question with regard to the importance of these air studies, especially if there is a differential point as to whether a visual change is being caused by a lesion about the optic chiasm or one involving the optic tracts and optic radiations in the brain.

*Treatment.*—The surgical approach to a tumor of the pituitary gland is by the trans-sphenoidal or the intracranial route. The trans-sphenoidal operation as carried out by certain surgeons is applicable in the treatment of certain cystic tumors, but unfortunately, the differential diagnosis between cystic and solid tumors is very difficult, with cystic tumors making up no more than 10 to 20 per cent of the total.

The surgical procedure most commonly used is right or left transfrontal craniotomy, the choice depending upon which side predominates in the manifestation of symptoms. The dura can be incised either along the sphenoidal ridge or along the lower edge of the opening into the cranium. By elevating the frontal lobe one can expose the optic chiasm and approach the tumor.

A recent advance that facilitates exposure of the optic chiasm and prevents undue pressure on the frontal lobe is that of spinal-fluid drainage. After the patient is anesthetized a plastic needle is inserted into the subarachnoid space in the lumbar region. Then as soon as the dura is open, 50 to 70 cc. of cerebrospinal fluid are aspirated through the needle. This relieves tension within the cranial cavity and at times make it unnecessary to use any force in retracting the frontal lobe.

In this connection it should be mentioned that thiopental (pentothal) sodium given intravenously is considered an excellent anesthetic agent, although some surgeons prefer ether inhalation or rectal anesthesia. When thiopental sodium is used, an intratracheal tube may be introduced after anesthetization and oxygen given throughout the operation. The use of this anesthetic agent and an intratracheal tube relieves the danger of increased intracranial pressure due to coughing during the operation.

With the chiasm exposed, there is usually evidence of the intrasellar mass, which may vary in color from red to purple. Because of the danger that this mass may be an aneurysm, a sharp needle of small caliber is inserted into it at an angle and aspiration is done. Usually no fluid at all or a brownish fluid can be aspirated. The presence of bright red blood, of course, indicates aneurysm. Should there be no blood or fluid, the capsule of the tumor is incised and the contents removed with suction and scoops. If the tumor proves to be a chromophobe adenoma, the capsule is teased gently from beneath the optic chiasm with forceps and suction and as much of it is removed as possible. After removal of the tumor the aspirated cerebrospinal fluid is replaced, and this brings the frontal lobe back in place. When the dura can be sutured and the wound closed, early ambulation is desirable for all patients who undergo craniotomy, the time and amount of ambulation depending upon the strength and post-operative reaction of the patient.

#### OPHTHALMOLOGIC DIAGNOSIS OF MENINGIOMA OF THE SPHENOIDAL RIDGE

Meningiomas constitute approximately 15 per cent of all intracranial tumors and it is generally recognized that they occur more commonly in women. It is postulated that some hormonal influence accounts for this difference in sex distribution. Further evidence for hormonal influence is the observation that they may develop during or shortly after pregnancy. Two meningiomas removed during pregnancy by Weyand and co-workers<sup>2</sup> showed microscopic evidence of an unusually foamy cytoplasm, which might have been the result of increase in the intracellular fluid. This could explain an increase in size of the tumor during pregnancy and a decrease after termination of pregnancy.

Although the ocular symptoms are the same regardless of the side on which the meningioma is situated, the general symptoms may differ. Tumors of the left sphenoidal ridge more often are associated with psychosis and other mental changes than are tumors of the right ridge. This probably is explained on the basis of involvement of the dominant hemisphere. For the same reason, removal of a meningioma of the left sphenoidal ridge is likely to prove more dangerous than removal of a lesion on the right side.

In Cushing and Eisenhardt's<sup>3</sup> series of 53 meningio-

mas of the sphenoidal ridge, the tumor was on the right side in 30 cases and on the left side in 23 cases. Elsberg and co-workers<sup>4</sup> reported 15 cases of proptosis due to intracranial tumors, most of which were meningiomas. In their experience, exophthalmos occurred more frequently on the left side in females and more frequently on the right side in males.

The sphenoidal ridge represents the anatomic dividing line between the anterior and the middle cranial fossae. It consists of the horizontal bony protuberance formed by the lesser and greater wings extending laterally from the anterior clinoid process, fanning out on its lateral extension to join the pterional region of the cranial vault. This bony ridge is in close proximity to the orbit and to the structures entering and leaving the orbit by way of the optic canal and the superior orbital fissure.

Unilateral failure of vision associated with primary atrophy of the optic nerve which often progresses to near blindness before the other eye becomes involved is an outstanding feature of meningioma of the sphenoidal ridge. This may or may not be associated with unilateral proptosis. Contralateral papilledema is a prominent finding. Oculomotor palsies are present in many cases. One of the characteristic syndromes in tumor of the inner part of the ridge is unilateral loss of visual acuity with homolateral optic atrophy and defects in the visual field, whereas tumor of the middle part of the ridge is characterized by lack of ocular signs.

It is often difficult for the neurosurgeon to be certain just where along the sphenoidal ridge the tumor actually arises. This is particularly true if the tumor is large, vascular and associated with much hyperostosis of bone and in so far as there is considerable overlapping of the ocular manifestations of meningiomas involving the various segments of the sphenoidal ridge.

The material that follows is based largely on Kearns and Wagener's<sup>5</sup> report on 106 surgically and pathologically verified meningiomas of the sphenoidal ridge from the files of the Mayo Clinic. In their series the youngest patient was a woman 25 years old while the oldest was a man 64 years of age. The sex ratio showed the usual preponderance of women, there being 76 women and only 30 men. The right side was affected more often than the left, 61 of the tumors being on the right ridge while 45 were on the left ridge. As for ocular symptoms, 73

of the 106 patients had disturbance of the eyes as the only, or a chief, complaint. The complaints consisted of loss of vision, increased prominence of one eye, double vision, pain around one eye and swelling of the lids. The remaining 33 patients complained of headache, convulsions and mental changes. It is interesting to note that of the 33 patients in whom eye symptoms were not noted, 15 had choked disks, 7 had pallor of one or both disks, 3 had pupillary abnormalities and 1 had a significant field defect.

Sixty-three of the patients were found to have loss of vision in one or both eyes which could be attributed to the tumor. Many of the patients were able to date the onset of loss of vision 5 to 10 years prior to the time of examination. Unilateral loss of vision always lateralized the tumor. If both eyes were involved, the tumor was, without exception, on the same side as the eye with the greater loss of vision.

The most frequent type of field defect was that of a prechiasmal lesion of one optic nerve. Nineteen patients were blind in one eye at the time of admission. Sixty had localizing field defects, of which 39 were unilateral, and 21 were bilateral. Of the 21 bilateral defects, 13 were variants of the bitemporal type and 8 were homonymous.

The most common ocular complaint next to visual loss was proptosis, 34 patients making this complaint. The protrusion varied between 2 and 19 mm. in extent and was usually straight forward, or straight forward and downward. It was non-reducible and in most cases it was not associated with pain.

Two mechanisms are responsible for the production of proptosis in meningioma of the sphenoidal ridge. The tumor may extend into the orbit in a dumbbell fashion and thus produce the exophthalmos of an orbital tumor, or it may cause hyperostosis of bone in the walls of the orbit without actual extension into the orbit and thus produce exophthalmos.

In 46 cases there were choked disks; the choking was bilateral in 31 and unilateral in 15. The papilledema varied from mild edema of one disk margin with only slight elevation, to 6 diopters of elevation of each nerve head. The intracranial lesion was homolateral with the papilledema in 10 of the 15 patients who had unilateral choking of the disk. It was contralateral in 5 patients, representing examples of the Foster Kennedy syndrome, since all



5 of these patients also had pallor of the homolateral disk.

Forty-two of the patients had pallor of one or both disks. In 34, the pallor was unilateral and on the same side as the tumor. The 8 patients with bilateral pallor of the disks all had chiasmal types of field defects, indicating that the tumor had spread toward the midline to involve the optic chiasm and the contralateral optic nerve. Pallor of the disks may be secondary to previous papilledema attributable to secondary optic atrophy. However, pallor of primary optic atrophy is more commonly found in patients with this type of tumor.

Meningioma of the sphenoidal ridge would seem to be a very rare cause of isolated dilatation and sluggishness of the pupil.

Only 15 of the 106 patients in the Kearns and Wagoner series were noted to have definite weakness of extraocular muscles. In 8 of these the limitations of rotation were not due to involvement of the cranial nerves, but were secondary to proptosis and hence were due rather to the abnormal position of the eye. Among the 7 patients with paresis actually due to involvement of cranial nerves, there were 4 patients with involvement of the sixth nerve, 1 with involvement of the third nerve, 1 with involvement of the third and sixth nerves, and 1 with involvement of the third and fourth nerves.

Roentgenograms of the heads of all patients should be made as a part of the routine investigation. Although the tumor itself is not visualized, the presence of calcification in the tumor or the associated osteomatous thickening of adjacent bone leads to a diagnosis in many cases.

Kearns and Wagoner, on the basis of their series of cases, postulated the usual and more typical findings in a composite hypothetical case. In the presence of a tumor of the sphenoidal ridge, such a patient (1) is more likely to be a woman in her forties or fifties, (2) will have noticed gradual protrusion of the right eye over a number of years, (3) will have had loss of vision over a long period either preceding, following or coinciding with the proptosis, (4) will have no history of pain although there may be headaches, (5) will have pallor of the disk, (6) will have a field defect suggesting a prechiasmal lesion, (7) may have choked disks and (8) will present, on roentgenographic examination of the head, a diffuse osteomatous thickening in the greater and lesser wings of the sphenoid.

#### CRANIOPHARYNGIOMA

Craniopharyngiomas constitute a small but important group of intracranial tumors. They comprise approximately 4 per cent of all intracranial neoplasms and about 30 per cent of all pituitary tumors. They have been called by a variety of names, such as hypophyseal duct tumor, craniopharyngeal duct tumor, Rathke pouch tumor, craniobuccal cyst, suprasellar cyst, epithelioma, interpeduncular cyst, simple squamous epithelioma and adamantinoma.

*Clinical Features.*—Craniopharyngioma is common in childhood, but is by no means confined to this age period. In a review of 100 cases of craniopharyngioma verified surgically or at necropsy at the Mayo Clinic, Love and Marshall reported the following distribution of patients according to age: 0 to 10 years, 19 cases; 10 to 20 years, 34 cases; 20 to 30, 12 cases; 30 to 40 years, 15 cases; 40 to 50 years, 11 cases; 50 to 60 years, 8 cases; and more than 60 years, 1 case. The youngest patient was 3 years old and the oldest was 67. In about half of this series of 56 males and 44 females the duration of symptoms was a matter of months, averaging 5 months. In the remaining cases, the duration of symptoms was a matter of years, varying from 1 to 31 years and averaging 4 years.

Craniopharyngiomas produce a multitude of symptoms of greatest variety. The principal causes of such symptoms are disturbances of pituitary function, pressure involvement of the optic nerves and chiasm, hypothalamic dysfunction and hydrocephalus. The symptoms of increased intracranial pressure—that is, headache and vomiting—were the most frequent primary presenting complaints in Love and Marshall's series. Progressive dimness of vision was the most common mode of onset of the disease. Objectively, central vision was found to be reduced in both eyes in 73 cases and in one eye in 8 cases.

The ocular findings in cases of craniopharyngioma are far from uniform, not only because of the variation in size and location of the tumor, but also because of the varied relational anatomy of the optic pathways. In the series just mentioned, the optic disks were normal in 15 cases, and there were papilledema in 28 cases, pallor of the disks in 30 cases, and simple optic atrophy in 21 cases. In the cases in which the disks were normal the duration of loss of vision averaged 6 months, while in those cases in which the disks were choked the duration of loss of

vision averaged 5 months. It is difficult to generalize as to the relationship of the tumor to the condition of the disks. For the most part, it might be said that in patients with choked disks the tumor most commonly was situated behind the chiasm, and in those with simple optic atrophy the tumor was in front of the chiasm.

Defects in the visual fields were asymmetric, whether bitemporal or homonymous. Bitemporal defects in the visual fields occurred most commonly, being present in 41 cases. Homonymous defects were present in 23 cases, unilateral temporal defects in 6, bilateral central defects in 4, concentric contractions in 2, and blindness in 4. The visual fields were normal in 8 cases, and in 12 instances data as to examinations of the visual fields either were unobtainable or had not been recorded.

Craniopharyngiomas produce roentgenologic changes which are characteristic of both intrasellar and extrasellar tumors. Extrasellar changes indicative of increased intracranial pressure were observed in 23 cases of the series under consideration. The outline of the sella turcica was abnormal in 63 cases. Changes in the sella turcica indicative of an extrasellar tumor, such as widening and flattening of the sella, foreshortening or erosion of the posterior clinoid processes from above, or widening of the outlet were found in 34 cases. Evidence of an intrasellar lesion was found in 29 cases.

Craniopharyngiomas have a tendency to calcify, as was seen in microscopic study of this series, in which 77 per cent of the tumors contained calcification. Roentgenologically, however, calcification was observed in only 56 per cent of the cases.

Endocrine disturbances occurred in 55 of the cases of this series; in only 32 of these was the patient less than 20 years old. Hypopituitarism was noted in 32 of the cases and in 8 of these the symptoms of both hypothalamic involvement and pituitary dysfunction were found. Depression of sexual function occurred in 23 cases; it was the most common feature of endocrine disturbance. Changes in hair and skin, such as absence or scantiness of axillary and pubic hair, were noted in 16 cases. In 12 cases stunted skeletal development was observed; in 2 of these the condition was described as being dwarfism. Loss of weight and emaciation were prominent signs in 12 cases. Adiposogenital, syndrome, diabetes, insipidus, hypersomnia and episodes of stupor were also indications of hypothalamic involvement. Psychiatric

changes which could be attributed to hypothalamic involvement were noted in 4 cases.

When there is a history of headache, loss of vision and endocrine changes, the diagnosis of craniopharyngioma must be considered; if the symptoms occur in a person less than 20 years old and are associated with calcification in or above the sella turcica, the diagnosis is unequivocal. In the presence of an adenoma the sella turcica usually is symmetrically enlarged. Meningioma of the tuberculum sellae usually occurs in patients beyond middle age, and there is gradual development of bitemporal hemianopsia without other symptoms.

Gliomas of the optic chiasm produce rapid loss of vision. Roentgenologic examination often shows an enlarged optic foramen.

*Treatment.*—The treatment of craniopharyngioma is unquestionably surgical and requires good exposure of the optic chiasm. For that reason, transfrontal craniotomy is the usual operative approach to tumors of the pituitary body. While it is customary to explore on the side on which there is the greatest compression of the optic chiasm, right craniotomy is to be performed when diminution of vision is equal bilaterally.

A great deal depends upon the anesthetic agent used. Nitrous oxide and ether may be administered by intratracheal tube, although the intravenous use of thiopental (pentothal) sodium, with nitrous oxide and oxygen administered by intratracheal tube, has proved more satisfactory in the majority of cases. Patients prefer thiopental sodium to ether, and in my experience this agent causes less tendency toward tightness of the brain than does other anesthetic agents. An added pre-operative measure consists of spinal-fluid drainage as described in the section on pituitary tumors.

Total removal of the craniopharyngioma is possible in only a small percentage of cases. In the Mayo Clinic series of 100 cases, 96 patients underwent operation; in only 15 of the 96, the tumor could be totally removed. Aspiration of the contents of the capsule and resection of the tumor and capsule were done in 71 operations; in 10 of these the resection was extensive. Intracapsular enucleation or aspiration and curettement were done in 12 cases, and in 4 cases aspiration alone was done. On 1 occasion it was necessary to transect the optic chiasm to get better exposure. The patient had bitemporal hemianopsia pre-operatively. In 5 cases the anterior com-

municating artery, after application of clips, was cut in order to secure better exposure. No loss of cerebral function was noted as a result of this procedure. In 4 cases the floor of the third ventricle was opened intentionally in an effort to relieve the internal hydrocephalus.

A review of the statistics indicates that after subtotal removal of this type of tumor there was definite evidence of recurrence; at intervals, varying from 2 months to 10½ years, operations for recurrence were carried out 11 times on 11 patients in the series. Roentgen irradiation was used both before and after operation with questionable results, although a number of patients apparently received a great deal of relief following irradiation.

Of the 96 patients who underwent surgical treatment, 38 died in the hospital, giving a hospital mortality rate of 40 per cent. Of the 58 patients who survived operation, 14 were operated on in 1944, or later. Of the remaining 44 patients, 3 were untraced or had not been followed for 5 years. Of the 41 traced patients, 21, or 51 per cent, lived 5 or more years after leaving the hospital. Five of these

patients survived 10 years or longer. Two were living 13 years and 1 was living 20 years after operation. At the time of this study, 17 patients were known to be living a year or more after operation; of this group, 13 were carrying on some type of useful activity.

#### REFERENCES

1. Love, J. G., and Marshall, T. M.: Craniopharyngiomas (Pituitary Adamantinomas). *Surg., Gynec. & Obst.*, **90**: 591-601 (May) 1950.
2. Weyand, R. D., MacCarty, C. S., and Wilson, R. B.: The Effect of Pregnancy on Intracranial Meningiomas Occurring About the Optic Chiasm. *S. Clin. North America*, **31**: 1225-1233 (Aug.) 1951.
3. Cushing, Harvey, and Eisenhardt, Louise: *Meningiomas—Their Classification, Regional Behaviour, Life History, and Surgical End Results*. Springfield, Illinois, Charles C. Thomas, 1938, 785 pp.
4. Elsberg, C. A., Hare, C. C., and Dyke, C. G.: Unilateral Exophthalmos in Intracranial Tumors With Special Reference to Its Occurrence in Meningioma. *Surg. Gynec. & Obst.* **55**: 681-699 (Dec.) 1932.
5. Kearns, T. P., and Wagener, H. W.: Ophthalmologic Diagnosis of Meningiomas of the Sphenoidal Ridge. *Am. J. M. Sc.* **226**: 221-228 (Aug.) 1953.

#### Aid to Cancer Diagnosis.

A rotating brush for painless early diagnosis of cancer in the throat has been developed by a Miami, Fla., physician. Dr. J. Ernest Ayre, of the Miami Cancer Institute, described the new instrument in the October 23 *Journal of the American Medical Association*. He said the brush could be used to collect cells for use in laboratory tests of visible growths in the throat. The diagnosis of cancer of the voice organ now depends on surgical removal of cells.

"The need for a screening method for early cancer of the throat has been emphasized by recent publicity on the importance of ruling out malignancy in heavy smokers suffering from throat irritation. It is sug-

gested that a simple technique such as that described here may play a useful role in annual cancer examinations and in examination of patients suffering prolonged hoarseness or throat irritation."

The instrument has a retractable brush and is curved to fit the throat. The bristles sweep rapidly in full circle and collect a rich concentration of cells. The procedure is so rapid that irritation is brief and no anesthetic is needed.

The most common type of malignancy in the throat is cancer of the outer layers of skin. Patients may suffer chronic hoarseness, cough and bleeding; chronically inflamed, reddened patches on the vocal cords that appear innocent may be early cancer. These persons should be observed closely, and the new instrument will help early diagnosis.



## SPECIFIC DRUG THERAPY IN THE TREATMENT OF PULMONARY TUBERCULOSIS

### A Note on the Management of Drug Reactions

LEE B. BROWN, M.D.

Blue Ridge Sanatorium,  
Charlottesville, Virginia

Streptomycin and PAS (para-aminosalicylic acid) have been in clinical use for several years and Isoniazid for roughly the past two years. A tremendous amount of information is available concerning the proper selection of drugs, the optimum dosage regimen, the duration of therapy, and the integration of drug therapy with the over-all management of the disease. It has been established that the probable drug therapy of choice consists of streptomycin sulfate, 1 gm. twice weekly, combined with PAS, 12 gms. daily; or if PAS cannot be used, Isoniazid, 5 mg. per kilogram of body weight per day. More recently, Isoniazid combined with PAS has been shown to be of real value. If possible, only one "major" drug, meaning streptomycin or Isoniazid, should be used at a time<sup>1</sup>.

The literature records many instances of streptomycin, PAS, and to a much less extent Isoniazid drug reactions, common and uncommon, serious and inconsequential. The purpose of this report is not to review the subject of drug reactions comprehensively but to consider the management of certain common drug reactions. This seems particularly pertinent at this time, since the practitioner is being called upon more frequently to manage the tuberculosis patient at sometime during treatment.

Drug reactions are of three general types: reactions associated with fever (the allergic or hypersensitive type), serious reactions which may not be associated with fever, and minor toxic reactions.

#### DRUG REACTIONS ASSOCIATED WITH FEVER (ALLERGIC TYPE)

The precipitous onset of fever with considerable variation in associated headache, malaise, chills, sweating, generalized aching, arthralgia, anorexia, and occasionally vomiting, is the usual clinical picture. Although not the ordinary thing, erythematous, macular, papular, and vesicular rashes may occur; the most common of these is probably hives. At the time of the reaction, it is difficult to know which drug is at fault. In retrospect, the relation of the reaction to the time streptomycin was given

or the lack of such a relationship might suggest that either streptomycin or PAS respectively was at fault. The wisest plan is to stop all the drugs in question and await the complete disappearance of the reaction. This usually occurs within 24 to 36 hours in the absence of dermatitis.

*One very important diagnostic point is that febrile reactions almost invariably occur within four to six weeks of the date the drugs were started. Febrile episodes after this time are rarely due to the drugs in question.*

Exacerbation of tuberculous disease is occasionally associated with febrile drug reactions, and this may confuse the clinical picture particularly if desensitization is in progress.

The white blood count is commonly elevated. Eosinophilia is noted occasionally. Leukopenia, when present, is more often associated with PAS reactions.

The principles underlying the management of the common febrile drug reaction are well known and simple: (1) withhold the suspected drugs until the reaction has subsided, (2) use small test doses of each drug in question (streptomycin, PAS, and Isoniazid) to identify the offending drug or drugs; and then (3) employ an appropriate desensitization program for the offending drug or drugs, or exclude the same from future drug therapy.

*Streptomycin.* A test dose of streptomycin sulfate (assuming this was the type of streptomycin in use) 0.25 gm. (intramuscularly) is given and followed by 0.5 gm. if no reaction occurs. If the 0.5 gm. dose is tolerated, it is quite certain that streptomycin sulfate is not the cause of the reaction, and it can be safely resumed in the usual dosage.

If a reaction does occur to streptomycin sulfate, as evidenced by fever, etc., test doses of dihydrostreptomycin are given exactly as described for streptomycin sulfate. If no reaction occurs, dihydrostreptomycin, 1 gm. twice weekly is given temporarily during desensitization to streptomycin sulfate. In this way there is no interruption of drug therapy.

*It is extremely rare that a reaction from dihydrostreptomycin occurs, even though a severe reaction may have occurred from streptomycin sulfate.* Desensitization to streptomycin sulfate or dihydrostreptomycin (the rare case) can be accomplished quite successfully.

An initial dose of 0.01 gm. (intramuscularly) is given and, if no reaction occurs, the dose is increased by 0.01 gm. daily until 0.1 gm. is given. The dose may then be increased by 0.05 gm. daily until 0.5 gm. is given. The usual dose of streptomycin sulfate can be resumed and dihydrostreptomycin discontinued. The dose of dihydrostreptomycin should be reduced to 0.5 gm. twice weekly when 0.2 gm. is reached in the desensitization program to streptomycin sulfate.

*PAS.* If no reaction occurs to the test dose of streptomycin sulfate, it is obvious that the reaction was due to PAS (assuming PAS was combined with streptomycin sulfate). A test dose of 2 gm. is suitable in most instances. Desensitization to PAS can be done, usually with success, or Isoniazid can be substituted, whichever seems preferable.

An initial dose of 0.125 gm. of PAS is given and increased by 0.125 gm. daily until 1.0 gm. is given. The dose is then increased by 0.5 gm. daily until 4.0 gms. is given; and then the dose is increased by 2.0 gms. daily until the full dosage is resumed.

*Isoniazid.* Test doses of 10 mg. or 25 mg. are usually adequate. Reactions to Isoniazid are rare. Desensitization is usually successful. A solution is best used in the desensitization process.

An initial dose of 0.1 mg. is given and this is increased by 0.1 mg. until 1.0 mg. is given. The dose can then be increased by 1.0 mg. daily until 5.0 mg. is given. Increments of 5.0 mg. in the dose are given daily until 25.0 mg. is tolerated; and subsequently increases of 25.0 mg. are given daily until the full dose is resumed.

It must be borne in mind that drug reactions of this kind are occasionally the result of sensitivity to more than one drug, and the most common instance of this is a reaction to both streptomycin and PAS.

Needless to say, any untoward reaction may call for a revision of the desensitization program. This consists of reducing the initial dose until tolerated, increasing the dose by smaller increments and more slowly. Occasionally, desensitization can be accomplished more quickly than indicated above.

A word of caution is appropriate with respect to severe drug reactions of this type which vary substantially from the common type described. Drug reactions associated with progressive papular or vesicular dermatitis, hepatitis with jaundice, marked leukopenia, and combinations of the above are often unpredictable in their course. Desensitization should be undertaken with the greatest caution; and, better still, the offending drug should be avoided. In the more frightening of these reactions, one must carefully consider whether drug therapy is absolutely necessary. It is well known that sensitivity to streptomycin and PAS decreases markedly with the passage of time; and it may be that drug therapy should be withheld at least temporarily, until it is clear that it is needed, at which time one may be surprised to find that the previously offending drugs are tolerated.

#### SEVERE DRUG REACTIONS WHICH MAY BE UNASSOCIATED WITH FEVER

Severe tinnitus and vertigo or evidence of progressive nerve deafness as a result of the use of streptomycin are not often met with using the dose 1.0 gm. twice weekly but were fairly common using 1.0 gm. daily. Using the streptomycin dosage, 1.0 gm. twice weekly, this type of reaction is not commonly seen in less than four to six months following the date the drugs were started. Deafness is far more serious and is usually caused by dihydrostreptomycin. *This is the basis for the belief that dihydrostreptomycin, even in doses of 1.0 gm. twice weekly, should not be used for more than three or four months.* The streptomycin preparation causing either severe tinnitus and vertigo or deafness should be discontinued. Isoniazid combined with PAS is then the drug therapy of choice.

Progressive papular or vesicular dermatitis is occasionally seen even though fever may be absent or inconspicuous. Exfoliative dermatitis is a real danger. Dermatitis of any kind is most often seen within a few weeks of starting the drugs, but it may be delayed, rarely, for months. The same caution expressed in connection with febrile drug reactions associated with dermatitis, hepatitis, and leukopenia apply equally here. Desensitization to the offending drug is frequently unsuccessful and sometimes dangerous; and, consequently, it is best avoided in future drug therapy.

Severe and progressive peripheral neuritis result-

ing from the use of Isoniazid is cause enough to discontinue this drug. An incapacitating syndrome may ensue with its continued use. The situation is more commonly seen in patients in a poor nutritional state.

The use of Isoniazid in patients prone to psychotic and convulsive disorders should be avoided.

#### MINOR TOXIC REACTIONS

Varying degrees and different combinations of malaise, fatigue, headache, myalgia and arthralgia, mild tinnitus, difficulty in visual accommodation and burning of the eyes, circumoral paresthesias, nervousness and irritability are commonly associated with the use of streptomycin sulfate and to a less extent with dihydrostreptomycin and Districin (Squibb) (equal parts of streptomycin sulfate and dihydrostreptomycin). If streptomycin sulfate is being used, one might consider the temporary use of Districin (six to eight months) or dihydrostreptomycin (three or four months). Symptomatic therapy is quite effective. Dramamine (Searle) is sometimes of value in controlling mild vertigo.

Mild anorexia, epigastric distress, flatulence, and occasionally diarrhea are often associated with the use of PAS. Temporary discontinuance of the drug, temporary reduction in dosage (3.0 gms. t.i.d.), and the taking of PAS with meals and with plenty of milk or other liquids are often effective in controlling

the symptoms. Management of upper GI symptoms and diarrhea need no special mention.

Isoniazid is almost always well tolerated. Rarely, nervousness and insomnia are associated with its use, and symptomatic therapy is quite effective.

Such minor toxic symptoms are rarely severe enough to warrant discontinuing the drug in question, even though the patient may be inconvenienced from time to time. As stated, minor modifications in the use of the drugs with the addition of symptomatic therapy will usually suffice.

#### SUMMARY AND CONCLUSIONS

The management of the common drug reactions resulting from the use of streptomycin, PAS (para-aminosalicylic acid), and Isoniazid has been outlined. Methods of desensitization to the various drugs have been suggested.

Drug therapy should not be discontinued indefinitely simply because the patient has had a drug reaction; and the same would apply to unnecessarily accepting a less desirable drug regimen. Desensitization is a successful means of avoiding both discontinuance of drug therapy and using a less desirable drug or combination of drugs.

#### BIBLIOGRAPHY

1. Chemotherapy of Tuberculosis in Man. Report to the Council on Pharmacy and Chemistry, J.A.M.A., **154**: 52, January 2, 1954.

---

#### Medical Literature Needed.

A letter has recently been received from Dr. T. K. Thomas, Hon. Medical Superintendent of St. George's Mission Hospital, Punalur, P. O., Travancore, S. India, in which he asks that members of The Medical Society of Virginia send him their used medical journals with all available back copies, medical books, reprints of articles. Dr. Thomas states that his hospital is a non-profit organization situated in

a hilly village and working among the poor labor classes. "As good medical literatures are very few in this part of the world, a small library was started recently, attached to the above Hospital. . . . Further Ayurvedic and Unani systems of medicine are very troublesome competitors to allopathic system here and proper equipment and medical literature are highly essential for the successful management of the Hospital."



## TREATMENT OF GENERALIZED CRYPTOCOCCOSIS WITH 2-HYDROXYSTILBAMIDINE—

### Report of A Case with Apparent Cure\*

M. RICHARD WHITEHILL, M.D.,

and

ARNOLD J. RAWSON, M.D.

Norfolk, Virginia

With the successful therapy of many of the bacterial infections by antibiotic agents, the problem of treatment of diseases of mycotic etiology has become more prominent. We have recently had under our care a patient with the generalized form of infection by *Cryptococcus neoformans* (*Torula histolytica*) and, encouraged by her apparent cure by 2-hydroxystilbamidine, we are reporting the case. No attempt to review the literature concerning either the disease or the therapeutic agent will be made.

Cryptococcosis (Torulosis) is a subacute or chronic, highly fatal infection caused by *C. neoformans* which may affect the skin, lungs, or other tissues of the body, but which has a marked predilection for the brain and meninges<sup>1</sup>. The disease is called "blastomycosis" in the European literature and must not be confused with North American blastomycosis, or Gilchrist's disease caused by *Blastomyces dermatitidis* or South American blastomycosis caused by *Blastomyces brasiliensis*. It occurs in all parts of this country and in scattered areas throughout the world. Clinically, localized and generalized forms have been described. Localized forms include meningeal, pulmonary, cutaneous, and osseous infections and there may be combinations of these. The central nervous system is most frequently involved, the lungs occasionally, and other organs seldom<sup>1</sup>. Rarely, there occurs a generalized type of the disease in which the lymph nodes, kidneys, liver, and spleen are predominantly invaded by the fungus and a clinical picture resembling Hodgkin's disease is presented<sup>2</sup>. Indeed, cryptococcosis has been described in association with Hodgkin's disease, though there seems to be no etiologic relationship between the two<sup>3</sup>. Our patient's course seems to represent that of the generalized form of cryptococcosis.

#### CASE REPORT

S. R., a 16 year old married, colored female, was admitted to Norfolk General Hospital on August

5, 1953, with the chief complaints of pain in the neck and loss of appetite. Her past history was non-contributory. She was born in Norfolk, Virginia, and, until shortly before the present illness, had spent all her life in that city. She married at the age of 15 and had never been pregnant. Her mother, father, and husband were reported as healthy. An uncle had died of tuberculosis in May, 1952, but she had had very little contact with him. In May, 1953, the patient visited relatives in Philadelphia, Pennsylvania. About a month later, she lost her appetite, became nauseated after eating and developed generalized aching and malaise. Then she noted a small painful lump in the right side of the neck and found that she was running a daily temperature elevation of 100° F. She consulted a physician in July, and, after he was unable to make a diagnosis and advised hospitalization, she returned to Norfolk. The system review was otherwise negative. Physical examination on admission to the Norfolk General Hospital revealed a pale, colored girl who weighed 117 pounds compared with her usual weight of 130 pounds. The temperature was 99° F, pulse 80, and blood pressure 130/60. The neck was not stiff. The eyes, ears, nose, and throat revealed no abnormality. There was no rash on the skin. There was a tender nodule the size of a marble just below the isthmus of the thyroid. A tender, slightly smaller nodule was felt just above the medial end of the right clavicle. Similar tender nodules were felt in each axilla and groin. The breast were normal. The heart and lungs showed no abnormality. The abdomen was flat and soft. The tender edge of the liver was palpable two finger breadths below the costal margin. The tip of the spleen was palpable one finger below the costal margin and it, too, was tender. Examination of the extremities and nervous system revealed no abnormalities. The pelvic and rectal examinations were within normal limits. On August 5, urinalysis of a catheterized specimen showed a specific gravity of 1.015, sugar negative, albumin one plus, red blood cells 10 to 15 and white

From the Department of Medicine and the Department of Pathology, Norfolk General Hospital, Norfolk, Virginia.

\*Read at the early Spring 1954 meeting of the Virginia Section of the American College of Physicians.

blood cells 6 to 8 per high power field. Hemoglobin was 9.4 grams, red blood cell count 3,100,000, white blood cell count 11,800 with a differential count of polymorphonuclear neutrophils 63%, eosinophiles 15%, lymphocytes 22%. The corrected sedimentation rate was 35 mm./hour, the hematocrit was 31 vol.%, the platelets numbered 362,700 per cubic mm. The bleeding and clotting times were normal. The fasting blood sugar was 107 mgms.%, NPN 20 mgm.%, uric acid 2.3 mgm.%, total protein 6.0 grams %, albumin 3.7 grams %, globulin 2.3 grams %, cholesterol 173 mgm.%, icterus index 6, thymol turbidity 6, cephalin flocculation 2+. The Mazzini serologic test for syphilis was negative. Urine culture showed *E. coli*. Blood culture on broth and Sabouraud's medium was sterile. There was no significant elevation of serum agglutinin titers against proteus, typhoid, paratyphoid, or brucella, or of heterophile agglutinins. Several blood counts and urinalysis revealed the same findings except that the thymol turbidity subsequently rose to 10, and the white blood cell count to 19,200. Tuberculin test with P.P.D. was negative in the first dilution strength and positive in the second. X-ray examination of the chest was within normal limits. From the time of admission, the patient ran a septic type of fever with a daily spike often reaching as high as 103° F. The tentative diagnosis was Hodgkin's disease. On August 7, biopsy of lymph nodes in the right supraclavicular region was performed by Dr. Eugene Lowenberg. The specimen consisted of an encapsulated ovoid mass 12 x 7 x 7 mm. having the appearance of a lymph node and accompanied by two smaller nodes. On section they were homogenous and white. Microscopically, the lymph node architecture was completely destroyed and replaced by granulomatous tissue (Fig. 1). This consisted of large numbers of multinucleated giant cells of the Langhans type. Between the cells were closely packed plasma cells with a few polymorphonuclear leucocytes and eosinophiles. Within the giant cells were numerous yeast-like organisms measuring 10 to 15 micra in diameter which were surrounded by broad capsules (Fig. 2). These organisms stained brilliant pink with the periodic acid-Schiff technique. Culture of the node on blood agar at 37° C. yielded small, round, pearly, yeast-like colonies. On Sabouraud's agar at room temperature, the organisms grew out as moist, slimy, cream-colored colonies. Smears from both preparations showed thick walled, ovoid, single-

budding, yeast-like organisms measuring 10 to 15 micra in diameter which stained positively with Gram's stain. No mycelia were formed after culture on corn meal agar at room temperature for over four weeks. The organism was identified as *Cryptococcus neoformans*. The identity was confirmed by Dr. Albert Kligman of the University of Pennsylvania, and Dr. Norman Conant of Duke University.

On August 14, the patient was given 2-hydroxystilbamidine, 75 mgms. in 200 cc. of 5% glucose by slow intravenous drip. The following day 150 mgms. of 2-hydroxystilbamidine were administered in a similar manner, and, on August 16, 225 mgms. of the drug were given. This latter dosage was administered daily for 17 days. Beginning with the third day of therapy, the febrile spikes appeared to become progressively lower. On the eighth day, however, they rose abruptly almost to their previous levels. On the fourteenth day of therapy, the temperature returned to normal and remained so until the day of discharge, September 5, 1953. During the interval of treatment with 2-hydroxystilbamidine, the patient experienced marked subjective improvement and, on discharge, her liver, spleen, and lymph nodes were no longer tender or palpable. Physical examinations of the patient on December 15, 1953, and on January 30, 1954, revealed no evidence of disease except for an acute coryza on the latter date. Her weight was 130 pounds. Urinalysis was normal. Hemoglobin was 13.3 grams, red blood cell count 4,380,000, white blood cell count 11,150 and the differential count normal except for an eosinophilia of 4%. The sedimentation rate was 27 mm./hour, icterus index 9, cephalin flocculation 3+, thymol turbidity 8, total protein 6.3 grams %, albumin 4.3 grams %, globulin 2.0 grams %, NPN 30 mgm.%. An X-ray examination of the chest was considered to be within normal limits.

#### COMMENT

The treatment of cryptococcosis heretofore has been highly unsatisfactory and the disease has almost invariably been fatal.

In 1945, Elson<sup>4</sup> reported that certain of the diamidines were effective *in vitro* against *Blastomyces dermatitidis*. These observations led Schoenbach and his colleagues<sup>5</sup> to use stilbamidine and propamidine in four cases of systemic blastomycosis. Beneficial results were obtained in three patients and encouraging results in a fourth. Good results were also ob-



tained in an additional case reported by Pariser and his colleagues.<sup>6</sup> Stilbamidine has previously been used by Snapper<sup>7</sup> in the therapy of multiple myeloma and by Sen Gupta<sup>8</sup> in kala-azar, and its administration found complicated by several toxic reactions.

administered over a period of 19 days with apparent cure.

#### SUMMARY

A 16 year old girl with generalized cryptococcosis (torulosis) was treated with 4.05 grams of 2-hy-

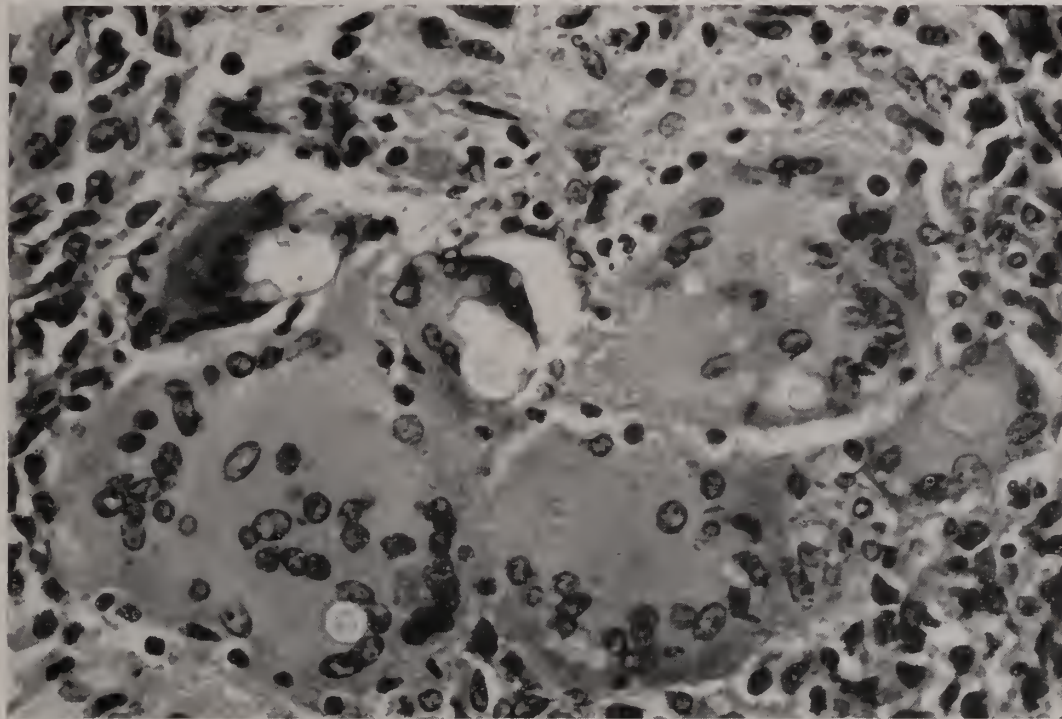


Fig. 1. Lymph node: Multinucleated giant cells contain *C. neoformans*. The node structure has been replaced by granulomatous tissue. H. & E. stain X500.

Solutions of stilbamidine are very sensitive to light and this reduces its therapeutic effectiveness and increases its toxicity. In animals, it may cause fatty changes in the liver and degeneration of the convoluted tubules of the kidney. In addition, in humans it has an affinity for the peripheral nervous system, producing a neuropathy which usually involves the trigeminal nerve and which may not appear until three or four months after the drug has been discontinued. In 1948, Snapper<sup>9</sup> reported that 2-hydroxystilbamidine did not produce trigeminal neuropathy and that solutions of it were more stable and less toxic than those of stilbamidine. In 1953, Snapper and McVay<sup>10</sup> reported the successful treatment of four cases of North American blastomycosis with 2-hydroxystilbamidine without evidence of any toxic reactions. With this background, our attention was directed to 2-hydroxystilbamidine as a possible effective therapeutic agent for cryptococcosis. In our patient, 4.05 grams of the drug were

droxystilbamidine given over a 19 days period with apparent cure.

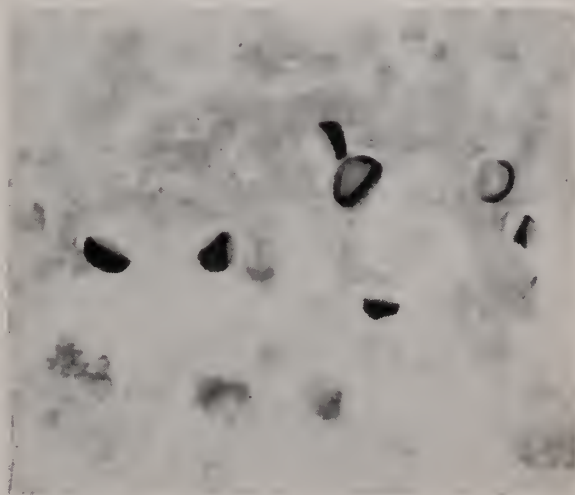


Fig. 2. Lymph node: Detail of *C. neoformans*. P.A.S. stain X1000.



## BIBLIOGRAPHY

1. Conant, N. F., Martin, D. S., Smith, D. T., Baker, R. D., and Callaway, J. L.: *Manual of Clinical Mycology*, W. B. Saunders Company, p. 111-126, 1945.
2. Harrison, T. R.: *Principles of Internal Medicine*, The Blakiston Company, p. 945, 1952.
3. Cecil, R. L., and Loeb, R. F.: *A Textbook of Medicine*, 8th ed., W. B. Saunders Company, p. 994, 1951.
4. Elson, W. O.: The Antibacterial and Fungistatic Properties of Propamidine. *J. Infect. Dis.*, **76**: 193, 1945.
5. Schoenbach, E. B., Miller, J. M., and Long, P. H.: The Treatment of Systemic Blastomycosis with Stilbamidine. *Ann. Int. Med.*, **37**: 31, 1952.
6. Pariser, H., Levy, E. D., and Rawson, A. J.: Treatment of Blastomycosis with Stilbamidine. *J.A.M.A.*, **152**: 129, 1953.
7. Snapper, I.: Stilbamidine and Pentamidine in Multiple Myeloma. *J.A.M.A.*, **133**: 157, 1947.
8. Sen Gupta, P. C.: Observations on the Neuropathic Sequel of Diamidinostilbene Therapy in Kala-Azar. *Indian M. Gaz.*, **78**: 537, 1943.
9. Snapper, I.: Influence of 2-Hydroxystilbamidine on the Course of Multiple Myeloma. *J. Mt. Sinai Hosp.*, **15**: 156, 1948.
10. Snapper I., and McVay, L. V., Jr.: The Treatment of North American Blastomycosis with 2-Hydroxystilbamidine. *Amer. J. Med.*, **15**: 603, 1953.

### Polio Patients Must Work.

Heroic efforts to save lives during summer polio epidemics are difficult to justify unless the paralyzed patient's independence and pride are restored after he goes home. Dr. John F. Marchand said the polio patient may lose muscle power but not mental power and personality. He does not "vegetate" unless neglected. He can find an "appropriate vocation and awakening interest" if helped promptly. Practical requirements for restoring polio victims to "an acceptable way of life" are "easily overlooked after a summer epidemic passes and community interest dwindles."

There are now 1,000 or more young adults and children, "the residue of recent epidemics" in iron lungs in scattered emergency care areas, Dr. Marchand said in the August 7th *Journal of the American Medical Association*. "A comprehensive national recovery program for [polio] patients is now as urgently needed as the excellent one in effect for the benefit of the blind: a practical schedule directed toward a restoration of confidence and dignity modeled after the achievements of Helen Keller, who set the precedent of an active career although blind, deaf and speechless.

Persons handicapped in one way "perform admirably in others" if only given the chance, he said. Communities must plan not only for emergency life saving during the polio season but for long-term personality saving later. Survivors of

epidemics should be transferred promptly to large regional centers and new "sheltered workshops" where they can learn constructive work and make occasional visits home. More important than the patient's need to go home immediately after recovery is his need for a chance "to discover himself not as a burden or family liability but as a modest social and economic asset." In addition, the patient who goes home too soon may be in danger of sudden death or delayed muscle breakdown. Convalescence, or a decline, continues for years and constructive treatment during this time is "a medical undertaking not at all less urgent than the original lifesaving effort."

"The pervasive undercurrent of defeatism prevalent in much present planning for hospital or home care bypasses real potentialities for recovery." "Although the death rate has been cut in some areas, care of post-acute poliomyelitis has been relatively neglected. An underestimation of community care requirements or improvised planning for the acute and convalescent stage of poliomyelitis can be costly and ineffective."

Medical services with new equipment and "a new standard for special education" can raise the polio survivor from "total vegetative dependency to that of a student and finally to that of a young person who need not wait, fancifully, for a full return to physical normality before he can rediscover his dignity and initiative as a productive person."

## PERIARTERITIS NODOSA ACCOMPANIED BY SARCOID-LIKE HISTOPATHOLOGICAL CHANGES\*

CHARLES W. WHITMORE, M.D.,  
Charlottesville, Virginia

Periarteritis nodosa, or polyangitis, may present a bizarre clinical picture simulating an almost unlimited variety of diseases. The clinical picture is produced by vascular lesions, and the effect of these vascular lesions on the blood supply of the various tissues, structures and organs of the body. It is the purpose of this report to review a case of periarteritis nodosa which demonstrated sarcoid-like lesions on microscopic examination, and to discuss this case briefly in the light of recent studies in this field.

### CASE REPORT

C.J.W., a 23 year old colored male, was admitted on the Dermatology Service of the University of Virginia Hospital on March 26, 1953, with a chief complaint of leg pain and ulcerations of the skin of the lower legs.

*Past Medical History:* The patient had a febrile illness thought to be compatible with rheumatic fever in 1948. This subsided after several months. He was then in apparent good health until June, 1952, at which time he had a second similar illness. During the second episode he improved with bedrest and salicylates, but, after having been in bed for a period of two months, had what appeared to be thrombophlebitis of the left leg. He was treated elsewhere with cortisone in low dosage, and aureomycin, for several weeks, followed by sulfadiazine for a period of several months. In January, 1953, after ambulation was begun, the patient noted swelling of the legs on dependency, as well as leg pain and ulcerations of the skin of the legs. A large ulcer appeared on the middle one-third of the lateral surface of the left lower leg, accompanied by two smaller ulcerations on the right lower leg. Two months prior to admission to the University Hospital, the leg pain, which was more severe at night, became a prominent feature of his illness.

*Physical Examination:* At the time of admission on March 26, 1953, the patient had an ulcer 4 cm. in diameter, which was on the lateral middle third of the left leg and a slightly smaller ulcer on the medial aspect of the middle third of the right leg. There was a small, circumscribed area of superficial ulceration on the lower third of the right leg near the medial malleolus. There was a moderate degree of induration surrounding the areas of ulceration, and there was moderate edema of both lower extremities.

The dental status was poor and he had both caries and unextracted roots. He had a brick-red tongue with normal papillae. The blood pressure was 120/80 and the pulse varied from 90 to 100 per minute.  $P_2$  was more than  $A_2$

and there was a Grade II pulmonic systolic murmur. Physical examination was otherwise normal.

*Laboratory Studies done during the Course of the Hospitalization gave the following results:*

Skin test with old tuberculin (1:1000) was positive at 48 hours.

Liver function tests, including icterus index, Hanger's flocculation, thymol turbidity, bromsulfalein and prothrombin time were normal. Glucose tolerance test was normal.

Routine urinalysis on repeated occasions and PSP test showed no renal abnormality.

The hemogram was normal upon admission with the exception of a 17% eosinophilia. The sedimentation rate ranged from 23 to 33 mm. per hour on five different occasions. Sick cell test was negative, bone marrow examination was normal and peripheral blood preparations for lupus erythematosus cells were negative. All other blood chemistry and serological tests were normal. Stool examination was normal. Spinal fluid examination was normal. Electrocardiogram was within normal limits. Roentgenographs of the hands, feet and chest revealed no pathology.

At the time the patient was first hospitalized, his peripheral total eosinophile count was about 1800 per c. mm. This showed a marked drop after the subsequent institution of cortisone therapy. Electrophoretic studies of the plasma proteins were done and these showed a slight to moderate decrease in the percentage of serum albumin and a moderate to marked increase in the percentage of gamma globulin present. These determinations were repeated several times during the course of his hospitalization and there was noted a tendency toward the normalization of the plasma proteins in conjunction with the cortisone therapy subsequently administered.

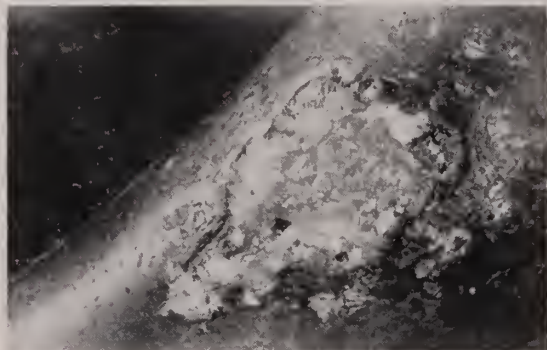
*Histopathological Studies:* The first biopsy specimen, taken from an area of induration on the left posterior calf before cortisone treatment was begun, showed changes of both periarteritis and sarcoid. Vessels at the lower border of the corium and in the upper subcutaneous tissue showed a variety of changes, including necrosis of the intima and media and a chronic inflammatory infiltrate tending to be perivascular in localization. In some vessels there was granulation tissue replacing the vessel walls as well as intimal proliferation and partial obliteration of the vessels. In addition, epithelioid cells were present in the perivascular areas. Giant cells resembling foreign body giant cells were also present in these areas. Isolated islands of epithelioid cells containing giant cells, but exhibiting no caseation necrosis, were also seen. There was a diffuse, mild, chronic inflammatory infiltrate throughout the dermis. Stains for acid-fast organisms and deep fungi were negative. A second biopsy was taken immediately adjacent to the site of the first biopsy, after

\*From the Department of Dermatology, University of Virginia School of Medicine, Charlottesville, Virginia.



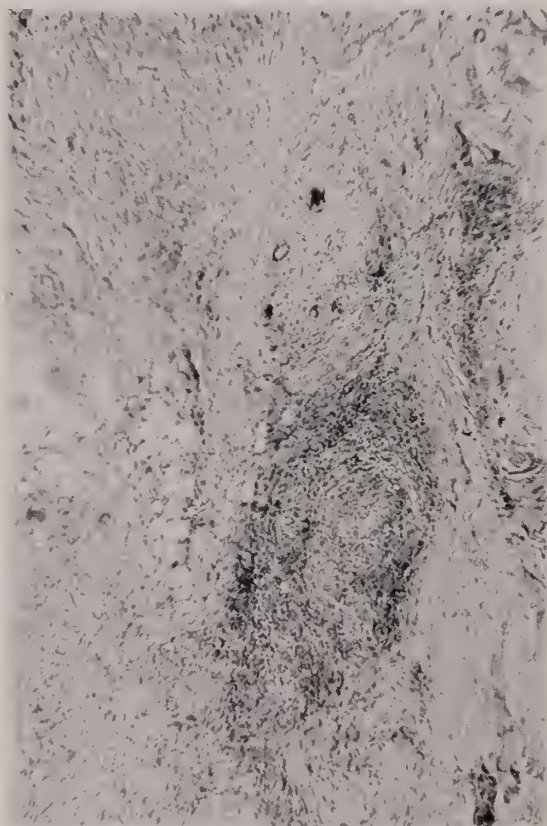
three weeks of treatment with cortisone. Elements of all the changes mentioned above persisted. However, all of these changes appeared to be considerably attenuated except in those vessels which had undergone actual obliteration.

*Treatment:* Treatment during the course of hospitali-



A.—A photograph of the ulcer of the left leg taken shortly after admission to the hospital.

zation consisted of bedrest, parenteral penicillin and streptomycin and multivitamins in therapeutic dosage. Topical management of the ulcers consisted of 1:4000 potassium permanganate wet soaks, calamine liniment containing Bacitracin, zinc peroxide paste and antibiotic



B.—Microscopic section No. 1, showing changes of periarteritis nodosa and sarcoid-like changes.

ointments. After one week without obvious improvement in the leg ulcerations or general status, systemic antibiotic therapy was discontinued. Topical dermatological treatment cleaned up the ulcers nicely, but there was no apparent decrease in the induration surrounding the ulcers and no evidence of healing.

Three weeks after admission, cortisone therapy was started. This therapy produced subjective improvement in the form of decreased leg pain, and the ulcers began to heal. The induration surrounding the ulcer sites decreased. At the time of discharge from the hospital the leg ulcers were healed and leg pain was absent.

*Subsequent Course:* The patient has been seen at irregular intervals during the year since his discharge from the hospital. While taking 100 to 150 mg. cortisone daily he has remained free from leg pain, afebrile, and able to work up to ten hours a day. When cortisone is withdrawn he tends to relapse. The patient traumatized his legs several times during his work and chronic ulcerations developed in the lower one-third of both legs at the sites of trauma. Dependent ankle edema has also been present frequently.

#### DISCUSSION

The etiology of periarteritis nodosa is unknown. It is generally believed to be a hypersensitivity phenomenon and has been reported in conjunction with rheumatic fever and rheumatic heart disease on numerous occasions. The most frequently involved vascular supply is that of the kidneys, heart, liver and stomach, intestines, mesentery, musculature and pancreas.

The clinical manifestations of periarteritis nodosa are protean and include: polymyositis, polyneuritis and gastrointestinal disturbances. A nephritic syndrome is also frequently seen and hypertension is commonly present. Weakness, weight loss, sweating, low grade fever, prostration, anemia and moderate leucocytosis are not infrequent. Skin manifestations may occur in the form of urticaria-like eruptions, edema, subcutaneous nodules, simple erythema, petechiae, or necrotic ulcerations. Periarteritis nodosa should be considered in the differential diagnosis of chronic ulcers of the lower legs when the etiology is otherwise unknown.

The laboratory findings in periarteritis nodosa are not specific for the disease<sup>1</sup>. However, a moderate to marked eosinophilia is often present in the peripheral blood. Recent work<sup>2</sup> indicates that electrophoretic analysis of the plasma proteins may show a lowered percentage of albumin and an elevated percentage of gamma globulin in a more or less characteristic pattern.

Because of the previous high mortality, the patho-



logical changes studied in periarteritis nodosa have been those of relatively short duration. With the general availability of ACTH and cortisone, periarteritis nodosa will probably be seen more frequently as a chronic disease, and its late stages may be more thoroughly studied. It has been recently suggested that perhaps both sarcoidosis and periarteritis nodosa should be considered as hypersensitivity granulomas<sup>3</sup> for the following reasons: both diseases involve nearly any body system or organ, both respond to ACTH or cortisone, both produce similar alterations of the plasma proteins, and at times both

present similar granulomatous histopathological changes. Features of both periarteritis nodosa and sarcoid were present in the case described here.

## REFERENCES

1. I. S. Wright: *Vascular Diseases in Clinical Practice*, 2nd Edition, p. 261, 1952.
2. Paul E. Wisenbaugh: *Effects of Cortisone and ACTH on Plasma Protein Electrophoretic Patterns, Laboratory Investigation*, 4: #3, Fall, 1952.
3. Albert Jackson and Irving Kass: *The Relationship Between Periarteritis Nodosa and Sarcoidosis*, *Annals of Int. Med.*, 38: #2, p. 288-307, February, 1953.

## New Books.

The following are among the books recently received at the Tompkins-McCaw Library of the Medical College of Virginia. They are available to our readers under usual library rules.

Allen—The skin.

Annual review of microbiology.

Blair—Biological effects of external radiation.

Brimley and Barrett—Practical chromatography.

Brown—Neck dissections.

Burch—Digital plethysmography.

Carlson and Johnson—The machinery of the body.

Catton—A stillness at Appomattox

Chusid and McDonald—Correlative neuroanatomy and functional neurology.

Ciba Foundation—Mammalian germ cells.

Ciba Foundation—Preservation and transplantation of tissues.

Ciba Foundation—The spinal cord.

Clemmessen, editor—Cancer of the lungs.

Courville—Commotio cerebri.

Fabricant, editor—Why we became doctors.

Field—Patients are people.

Fleming and D'Alonzo, editors—Modern occupational medicine.

Floyd—Symposium on fatigue.

Gillilan—Clinical aspects of the autonomic nervous system.

Gray—Anatomy of the human body.

Greenberg—Clinical pathways of metabolism.

Gurd, editor—Chemical specificity in biological interactions.

Hackett—Cliff's edge.

Harrison—Principles of internal medicine.

Hill—Practical fluid therapy in pediatrics.

Kocher and Dearstyne—Shadows in silver.

Lindberg—Chemistry and physiology of mitochondria and microsomes.

Livingston—Diagnosis and treatment of convulsive disorders in children.

Major—History of medicine.

National Academy of Sciences—Annotated bibliography of analytical methods for pesticides.

Neel and Shull—Human heredity.

Organic analysis.

Recent progress in hormone research.

Russell—The scourge of the swastika.

Schroeder—Hypertensive diseases.

Shirley—The child, his parents and the physician.

Simmons—Social science in medicine.

Snell and Snell—Colorimetric methods of analysis.

Stewart—Stewart's scientific dictionary.

Symposium on the laboratory propagation and detection of the agent of hepatitis.

Weeks—Autobiography of John E. Weeks.

Welch, editor—Manual of antibiotics.

Yater—Fundamentals of internal medicine.

Yearbook of general surgery.

Yearbook of pediatrics.

## PHYSICAL MEDICINE FOR THE GENERAL PRACTITIONER

LEONARD D. POLICOFF, M.D.,

and

HERBERT W. PARK, M.D.,

From the Department of Physical Medicine and Rehabilitation,  
Medical College of Virginia  
Richmond, Virginia

The specialty of Physical Medicine and Rehabilitation has developed largely within the last two decades. Because of an origin stemming from many disciplines, much information offering therapeutic and diagnostic aid to the family physician lies buried in the literary productions of medical journals of limited circulation and has not yet found its way into those textbooks most readily available as references. It is with the hope of stimulating general interest in the therapeutic approach of the physiatrist that this article is presented. This is the first of a planned series of articles detailing the general scope of this field of medical practice.

The primary objective of the general practitioner from a physiatrist's viewpoint is what has been called "preventive rehabilitation"<sup>1</sup> or "disability control"<sup>2</sup>. This might be simply defined as locking the barn door *before* the horse is stolen. This concept, as will be illustrated, is for the practitioner best embodied in the treatment of the hemiplegic and of the arthritic.

The function of muscle and joints is movement. Normal joints left at rest soon develop synovial adhesions which rapidly result in permanent fixation. Muscles unused atrophy and eventually undergo fibrosis. Too frequently in the course of a prolonged illness these facts are overlooked. A seriously ill patient is allowed to assume and maintain contorted bed positions which may become permanent. Even prolonged sitting in a wheelchair may produce irremediable hip and knee flexion contractures which make walking impossible. The disability arising from such acquired deformities may be greater than the original disease. While this most often occurs in the elderly and in those who already have joint disease, even children are not immune. Simple attention to physiological bed positioning and the use of a bed exercise routine which carries each joint through its normal range of motion several times a day will effectively prevent this type of catastrophe. The exercises may be carried out passively if the patient is too weak or debilitated to participate but

should preferably be active voluntary motion. Instructing the patient to keep his extremities moving will not accomplish the objective. Unsupervised movement is incomplete and ineffectual. The exercise routine can most successfully be carried out by a trained physical therapist but, if necessary, a member of the family can be taught to supervise an adequate program.

The decubitus ulcer, too, is best treated by anticipation. Its prevention is facilitated by meticulous attention to hygienic measures and the use of a firm supporting surface with no irregularities to produce local areas of pressure. The patient must be turned from the prone to the supine position at intervals of one to two hours. A Stryker frame makes this procedure effortless and is more effective than the air or oscillating mattresses in common use. If decubitus ulcers do develop, twice daily immersion in the Hubbard tank rapidly cleanses the involved areas and permits earlier skin-grafting.

The concept of preventive rehabilitation is vital in the treatment<sup>3</sup> of the hemiplegic patient. Cerebrovascular disease is ever on the increase. As the average age of the population continues to rise, the general physician will be called on more and more to treat the residuals of the cerebrovascular accident. The physical treatment should begin as soon as possible after the acute accident, preferably within 72 hours, and should only be delayed by shock, severe debility or high fever. Anatomical evaluation of the upper extremity will demonstrate that flexor, adductor and internal rotator muscle groups are the strongest. If allowed to follow a "natural" course, a hemiplegic upper extremity becomes frozen in a position of adduction and internal rotation at the shoulder, flexion and pronation at the elbow and flexion at the wrist and fingers. Such an extremity is functionally useless when voluntary control is later re-established. Similarly, in the lower extremity the tendency is to develop external rotation of the thigh and a drop-foot deformity with shortening of the Achilles' tendon which, when ambulation

becomes feasible, results in the classical circumduction gait. The initial approach to this problem is by bed positioning. The arm is abducted at the shoulder (position may be maintained by a pillow in the axilla) flexed  $90^\circ$  at the elbow with the wrist and fingers maintained in neutral position by an extension splint, removable for exercise. The leg is positioned in neutral position (neither internally nor externally rotated) with sandbags and the foot kept flexed at  $90^\circ$  against a foot board to which it may be fastened with a loose webbing strap. Twice daily all involved joints are carried passively through the entire available range of motion. Muscle re-education of the involved muscle groups is begun to re-establish voluntary control. As soon as this is achieved, a program of muscle strengthening exercises for extensor, abductor, external rotator muscle groups in the upper extremity and for the extensors of the knee and dorsiflexors of the foot is begun. When strength and endurance are adequate, attempts to achieve the erect posture are begun by the use of tilt boards and similar devices which allow for gradual changes in position as tolerated. Eventually ambulation, first in parallel bars, then with crutches or canes is achieved until finally independent walking becomes feasible. Some patients are left with a drop-foot deformity which must be corrected by a short leg drop-foot brace in order that a safe sure gait be possible. The retraining of speech in the aphasic and the achievement of fine motor skills in the affected hand are based on skilled techniques available in institutional departments of speech and occupational therapy and will not be discussed here. One factor frequently overlooked is that recovery from hemiplegia may be hindered both by the visual defect associated with homonymous hemianopsia and by the frontal lobe syndrome associated with extensive damage to that area of the brain.

The rheumatic joint diseases constitute a large segment of the chronic problems of the practitioner. The medicinal approach to therapy with gold salts, salicylates, Butazolidin (phenylbutazone) and the cortical steroids has been well documented in the literature and need not be further discussed here. Physical medicine<sup>4</sup> is an important addition to the treatment regimen. It is effective for the relief of pain, the mobilization of joints, and the prevention of deformity. The use of local heat to reduce pain is as old as medicine itself. Technological advances

in the present era have enabled us to measure accurately the effectiveness of the various heating methods. Local use of wet heat in the form of hot packs, hot soaks, and contrast baths produces heating of tissue only to a depth of 1 to 5 millimeters. However, there are other beneficial effects produced reflexly. These include relaxation of muscle spasm adjacent to involved joints, local and eventually general vasodilatation and secondary changes in tissue metabolism. More effective heating can be achieved by the use of general body heating in hot tub baths, Hubbard tanks or moist air cabinets. Infra red lamps are scarcely more effective than hot packs but short wave and microtherm diathermy will produce heating in depth up to several centimeters. For small areas such as the hand, repeated immersion in a paraffin bath at  $120^\circ$  to  $125^\circ$  F. gives effective heating. Total body heating by fever therapy (either with typhoid vaccine or the inductotherm cabinet) requires extensive nursing supervision and is seldom indicated. A recent addition to physical methods is the use of ultrasonic energy to produce deep heating of tissues. This technique is dangerous in unskilled hands and is mentioned only to complete the list. While heat does relieve pain, its use in acutely inflamed joints may be harmful, tending to increase synovial exudation and muscle spasm. Prolonged heating beyond 30 to 45 minutes at one time results in secondary vasospasm, accumulation of tissue metabolites, increasing pain and muscle spasm. However, as a rule, heat may safely be applied for short periods several times daily.

After local heating has been applied, stroking massage can be utilized in the region of the joint. This has a two-fold purpose, to move surplus fluids centripetally via lymphatic and venous channels and to cause relaxation of muscle spasm. If sufficient relief of pain and spasm is achieved by these methods, they are followed by an active (voluntary) exercise program to maintain the available range of motion at the affected joints. In subacute or chronic arthritis the patient is placed on an arthritic exercise routine as a measure for disability control. This routine requires all joints to be moved through their maximum range of motion several times (10 to 15 repetitions) twice daily. This will, even in chronic rheumatoid arthritis, prevent the development of fixed deformed joints. In osteoarthritis of



the knees highly effective therapy consists of progressive resistance exercises with weights to increase the strength and bulk of the quadriceps muscle and the available joint motion at the knee. Molded splints are frequently used for immobilization of acutely inflamed joints. While it is true that rest of the part diminishes pain, unless the splint is removed daily and the part allowed some movement, the immobilization may become permanent.

These are only some of the facets in the specialty of Physical Medicine and Rehabilitation which touch the daily work of the general practitioner. Others include the treatment of postural back strain, the neuromuscular diseases and the residuals of non-surgical trauma. These factors will be discussed in a subsequent paper.

#### CONCLUSIONS

A general principle becoming ever clearer in all phases of medicine is that more can be gained by mobilization than by immobilization. This prin-

ciple is exemplified in the early ambulation of the post-surgical patient and the currently popular arm-chair treatment of myocardial infarction. It is equally true in the treatment of the hemiplegic and the arthritic. A rational, easily applicable physical treatment program for these so commonly met disorders has been outlined. Adherence to the principle of early, effective mobilization will restore many of these patients to useful, active lives and will prevent needless suffering and disability.

#### REFERENCES

1. Bilik, S. E.: Prevention of Superimposed Disabilities, *New York State Journal of Medicine*, Jan. 1, 1954.
2. Park, H. W.: Disability Control, *Virginia Medical Monthly*, **81**: 156-158, April, 1954.
3. Rusk, Howard: Hemiplegia and Rehabilitation, Seminar, Jan.-Feb., 1952.
4. Traut, E. F.: Physical Medicine in the Treatment of Arthritis, Rheumatic Diseases, Chapt. XLII, C. V. Mosby Co., 1952.

*1201 East Broad Street.*

#### Women May Travel While Pregnant.

Traveling during pregnancy is not likely to be harmful if mixed with "a large dose of common sense."

An editorial in the September 25th *Journal of the American Medical Association* said a study of 500 pregnant women at Robins Air Force Base Hospital showed 413, or 82.6 per cent, traveled during pregnancy. The total distance was 817,961 miles, or an average of 1,980 miles a person. Most of it was in the second three months of pregnancy and was largely by automobile. Only a few of the women suffered

ill effects.

Travel by present-day means is harmless if care is taken. For example, pregnant women about to begin an automobile trip should plan the itinerary well in advance in order to avoid unnecessary inconvenience. Nourishing meals, short walks, and plenty of rest on the trip are advisable. Medication against air or seasickness should be taken along on plane or boat trips. Long bus or train trips should be arranged to include stop-overs. And the possibility of trouble in finding competent medical help during the trip always should be considered.

## MEDICO-LEGAL NOTES

**Malpractice Liability of Hospital House  
Staff Physicians in Virginia**

The problem of whether or not a physician serving as a house staff officer in a hospital is liable for malpractice is brought into acute focus due to the frequent economic inability of this group of physicians to provide malpractice insurance for themselves. This is particularly true since the recent rise in malpractice insurance rates.

Persons concerned with the problem of house staff officer liability for malpractice have been unable to find a statute in the Code of Virginia directly in point and have been unable to locate a court case specifically stating this liability or absence of this liability. Some of these persons have, therefore, erroneously assumed that there is no law governing the problem.

Negligence, which is the basis for an action for malpractice, was scarcely recognized as a separate tort, or civil wrong, before the earlier part of the nineteenth century. Prior to that time, the word had been used in a very general sense to describe the breach of any legal obligation, or to designate a mental element, usually one of inadvertence or indifference, entering into the commission of other torts. Some writers have maintained that negligence is merely one way of committing any particular tort, just as some courts, for example, still speak occasionally of a "negligent battery". However, for nearly a century, negligence has received more or less general recognition as an independent basis of liability, with distinct features of its own, differing on the one hand the intentional tort, and on the other hand from those actions for injuries for which liability is imposed regardless of fault.

About the year 1825, negligence emerged out of other forms of legal action and began to be recognized as a separate basis of tort liability. One of the earliest appearances of what we now know as negligence was in the liability of those who professed to be competent in certain "public" callings. An inn keeper, a blacksmith, or a surgeon was regarded as holding himself out to the public as one in whom confidence might be reposed, and hence as assuming an obligation to give proper service, for the breach of which, by any negligent conduct, he might be liable.

An unavoidable accident is an unintended occurrence which could not have been prevented by the exercise of reasonable care. In general, under modern common law there is no tort liability for the unavoidable accident.

Negligence is conduct falling below the standard established by law for protection of others against unreasonable risk of harm. The elements necessary to a cause of action based on negligence are:

- (a) A legal duty to conform to a standard of conduct, which protects others against unreasonable risks
- (b) A failure to conform to the standard
- (c) A reasonably close causal connection between the negligent conduct and a resulting injury
- (d) Actual loss or damage

Changing social conditions lead constantly to the recognition of new duties. Perhaps no better general statement can be made than that the courts will find a duty where, in general, reasonable men would recognize it, and agree that it exists.

One who injures another by an affirmative negligent act may be held liable. For an omission to act, there is no liability unless there is some definite relation between the parties which is regarded as imposing a duty to act. When one enters upon an affirmative course of conduct affecting the interest of another, he may be regarded as assuming a duty to act, and thereafter be regarded as liable for negligent acts or omissions.

Professional men in general, and those who undertake any work requiring special skill, are required not only to exercise reasonable care in what they do, but also to possess a minimum of special knowledge and ability. Most of the decided cases have dealt with physicians, but the same undoubtedly is true of attorneys, engineers, accountants, and many other professions. In the absence of a contract to cure, a physician does not insure the results of his treatment and is not liable for an honest mistake of judgment. By undertaking to render medical services, even though gratuitously, he is ordinarily understood to hold himself out as having the knowledge and skill commonly possessed by other members of the medical profession under similar circumstances.

He is entitled to be judged according to the standards of the school of medical thought which he professes to follow, and by those standards common to the community in which he is practicing. If he represents himself as having greater skill than this, or less, and the patient consents to treatment with that understanding, the standard to which he is held will be modified accordingly.

Modern licensing statutes have been interpreted as establishing a minimum standard of knowledge and skill for the entire medical profession, for lack of which anyone who practices medicine will be held liable.

It is thus clear that the general rules of the common law create for the physician or surgeon, who is duly licensed to practice, a legal duty to conform to the standards of conduct created for him for the protection of others against unreasonable risks. Where the physician fails to conform to these standards of conduct and there is a reasonably close causal connection between his failure to conform to this standard and an injury resulting in loss or damage to the interest of another, the physician or surgeon is liable for his negligent action in a suit termed malpractice.

The only question that arises with regard to hospital house staff physicians is whether or not their special status as employees of a hospital relieves them of the general liability for malpractice which the common law imposes upon all physicians. There is no case or statutory law in Virginia to indicate that physicians who are house staff officers are relieved of this common law liability.

Physicians who are employed by a corporation or

by a hospital are usually in the status of independent contractors in relation to their employer. However, a hospital house staff physician, particularly one involved in an accredited training program, has in all probability, a legal relationship of servant or agent in relation to senior staff members, under many circumstances. Where such a relationship can be shown to exist the senior staff member may acquire vicarious liability for the acts of the interns or resident physician. Most senior staff members carry malpractice insurance which recognizes the servant status of house staff physicians, under certain circumstances.

It is often assumed that the house staff physician is economically immune to suit because of pauperism. This is frequently not the case.

The question of whether or not a hospital should provide malpractice insurance for its house staff members, as part of the cost of doing business, is a decision which must be made by each hospital. It is not within the scope of this article to answer the question as to whether or not the state, or an agency of the state, may expend tax funds for the satisfaction of private liability of house staff physicians, or provide insurance for their private risks from the same funds. This question, of course, does not arise with regard to a private hospital.

An alternative solution to the problem is that statutory law be enacted to limit the common law liability of house staff physicians for malpractice, in recognition of their special status. However, some other group of individuals would, in all probability, have to assume the liability as it is unlikely that the legislature would be willing to leave a damaged patient with no remedy.

---

### AMEF Nears One Million Mark.

Several large contributions from state medical associations have boosted the American Medical Education Foundation nearer to its goal of two million dollars in 1954. The California Medical Association recently contributed \$100,000. Another large contribution came from the Arizona Medical Association in the amount of \$7,230, which represents

a \$10 per member dues increase voted for AMEF by the association. Both Arizona and Utah have followed Illinois physicians by voting a dues increase as a method of increasing contributions from their states.

Since January 1, 1953, the Foundation has received a total of \$968,000 and expected to reach the one million mark in September.



## PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.

*State Health Commissioner of Virginia*

### Immunization of Infants

Immunization procedures should be instigated early to protect against certain diseases. Studies in recent years show that most infants during the first few months of life can develop antibody levels sufficient for protection through the administration of antigens of diphtheria, pertussis and tetanus. Although the levels are not as high as those which are reached through the same stimulation given at a later age, they are, in most cases, adequate. It has been shown that the giving of diphtheria and pertussis vaccine in combination results in a higher level of immunity against diphtheria when infants are immunized before the age of six months than when they are immunized for diphtheria alone after six months.

Whooping cough has been and still is a dangerous disease in very young infants. The mortality due to pertussis occurs largely in the first six months and active immunization must be given early if it is to be effective. Fortunately, hyperimmune serum and some of the antibiotics do afford some benefit in treatment. In the South this need for early immunization is emphasized by the fact that reported Negro death rates for pertussis are two to three times the rates for whites. Rural death rates are generally higher than urban rates.

It is generally advised that all susceptible children of preschool age (those under five years) should be vaccinated against pertussis. Young infants living in institutions and in households where there are older susceptible children, should have immunization started by the time they are three months of age because of the great risk of exposure. Other children should have this immunization started by the time they are six months of age. During the months when pertussis is prevalent in a community, the earlier plan should be used.

The value of early protection against diphtheria is evidenced by the continued reduction in the number of cases reported through the years. This great reduction in both clinical and subclinical diphtheria through active immunization, has introduced a new problem. A generation ago, prior to widespread active

immunization, it was generally assumed that during their first few months of life, most infants were protected against diphtheria by antibodies acquired during fetal life from their mothers. Now, fewer and fewer mothers have a sufficiently high antibody level to afford protection to their offspring during the early months of life. This fact points to the need for early immunization against diphtheria.

Tetanus is included in the triple antigen in order to avoid giving antitoxin containing horse serum at a later age. It has also been found that about half the children admitted to hospitals with clinical tetanus have not had antitoxin. This is due to the fact that they had no recognized portal of entry of tetanus bacilli or that their wound had been regarded as so minor that antitoxin had not been given. Had tetanus toxoid been given early and the booster doses administered at the necessary intervals, there would have been a high degree of protection afforded these children.

For a number of years the pediatricians and general practitioners in Virginia have emphasized the value of early immunizations and have made these available in their offices. In addition, the health districts in the state have held free weekly immunization clinics and, on occasions, special clinics for mass immunization of children not immunized by their family physician.

The booster dose of the D.P.T. vaccine may be overlooked and its importance should be emphasized to the parent. A schedule or reminder card should be given for each child. A telephone call or visit from the nurse may be necessary to get some children back.

In this country the rarity of smallpox may lead some to minimize the importance of vaccination against this disease. The control of smallpox has been brought about through vaccination and no relaxation should be permitted. Vaccination of infants is recommended between the sixth and twelfth month and is repeated when the child enters school and when the disease appears in the community.

Both morbidity and mortality resulting from in-

fections with the above named diseases may be reduced and prevented through the widespread use of immunizations. Illness and death from these diseases may be brought to the irreducible minimum. This is the goal that the Virginia State Department of Health is striving to reach.

---

MONTHLY REPORT OF THE BUREAU OF  
COMMUNICABLE DISEASE CONTROL

	Oct.	Oct.	Jan.-	Jan.
	1954	1953	Oct.	Oct.
			1954	1953
Brucellosis -----	4	4	41	52
Diphtheria -----	1	9	28	72
Hepatitis -----	176	211	3284	2059
Measles -----	88	58	23534	4728
Meningitis (meningococcal) ---	4	12	84	169
Poliomyelitis -----	127	89	541	683
Rocky Mt. Spotted Fever -----	6	3	41	59
Streptococcal Infections -----	250	328	4003	4690
(Including Scarlet Fever)				
Tularemia -----	2	2	31	25
Typhoid Fever -----	9	6	51	47
Rabies in Animals -----	26	33	310	382

---

### Schedule of Infant Immunization.

The Child Health Committee of The Medical Society of Virginia and the State Department of Health have requested that the following outline regarding immunizations would be useful to Virginia doctors:

- 3 Months -----One dose of alum-precipitated diphtheria and tetanus toxoids and pertussis vaccine combined.
- 4 Months -----Second dose.
- 5 Months -----Third dose.

A booster dose should be given at:

18 Months -----3 Years — and 6 Years

6-12 Months -----Smallpox vaccination. (Repeat on entering school and when disease appears in community.)

(Published recommendations of American Academy of Pediatrics. Approved by the Child Health Committee of The Medical Society of Virginia and the State Health Department.)

NOTES  
ON  
PULMONARY TUBERCULOSIS\*

Modern Therapy (V)  
Non-Sanatorium Care of the Active Case (B)

Basic treatment of active pulmonary tuberculosis consists essentially of a trial rest schedule, in bed or out, followed by such modification from time to time as may be needed to achieve and maintain over-all treatment requirements. This applies whether it is prescribed alone or supplemented by drugs or other measures.

This naturally is as applicable to the non-sanatorium case as it is to almost all patients who take formal treatment anywhere for active tuberculosis for either cure or "control". Occasional exceptions would be those who continue regularly on reversible pneumothorax or pneumoperitoneum refills, but who have reached a point, in course of healing, where they may otherwise lead *perfectly* normal lives—uninfluenced in any *other* way by the fact that they still have active tuberculosis. (If the collapse is reversible, the presumption is that the procedure is maintained for an active component of disease still believed to be "smouldering" in the compressed lung tissue and which would likely constitute a *demonstrably* definite hazard to health or life were the collapse procedure to be prematurely abandoned.)

Systemic (body) rest is practically synonymous with "conservation of energy" and is *universally* recognized to be of *proven* worth *in and of itself* in the treatment of tuberculosis, as for many other infections. Its continued employment as a therapeutic agent, *even alone*, therefore should not be discarded lightly.

When a case is inoperable, there is no obligation to operate. Thus surgical statistics can be maintained upon a fairly high and respectable plane. But in the past particularly, many a far advanced case, being incurable by bed rest or surgery, still had to have bed rest prescribed or at least provided. Failure to do little more than postpone death under these circumstances should not thoughtlessly be chalked up on the debit side of systemic rest—unconsciously to prejudice one against its determined and enthusiastic application in the many many instances where it can prove of vital, often *crucial* importance, whether used

alone or in conjunction with suitable medicinal and/or surgical adjuvants (in or outside a sanatorium).

There is nothing to date to indicate that drug therapy or surgery can *completely* replace systemic rest. Nor, is there, in spite of prevailing widespread practice to the contrary, convincing evidence to indicate that drugs need invariably be prescribed for every newly diagnosed non-sanatorium case, as a supplement to systemic rest.

One need only call to mind the acknowledged fact that curtailment of extra-curricular pursuits such as golf, gardening, poker, hunting, woodwork, etc., is, in itself, no mean therapeutic weapon! In some instances, as much as 20-50% of energy can be conserved every twenty-four hours in this way alone, during the 8 to 12 hours many persons neither work nor sleep. It naturally follows that the resulting systemic rest, or even a *far* lesser amount, can, in many patients, add up to "quantity sufficient" for the purpose—which is the primary objective of treatment. Thus in selected cases, *needless* sanatorium care can be obviated. Likewise drug therapy can be held in abeyance.

In the December 1953 issue of the Virginia Medical Monthly attention was called to the fact that the three principle anti-tuberculosis drugs—streptomycin, PAS and Isoniazid—are seldom administered concurrently. Apparently most physicians prefer to hold *one* of these *in reserve*, at least initially. If this makes sense, then an initial withholding of drug therapy *altogether* in selected cases (among those not in need of immediate sanatorium care) would appear not to be wholly lacking in rationale. Moreover, by permitting Nature, where possible, to have an opportunity to function effectively through employment of systemic rest alone, in carefully regulated amounts, gratuitous creation of resistant strains of tubercle bacilli can be avoided, for whatever this may bode.

It is generally agreed that anti-tuberculosis drugs, when given at all, should, with few exceptions, be administered continuously over many many months (rather than intermittently, or for only a few months). Accordingly, it would seem, on general

\*Prepared by the Virginia State Health Department.



principles, that anti-tuberculosis drugs, like penicillin and other antibiotics for non-tuberculous infections, should be prescribed only after extremely careful appraisal of immediate indications in each individual case with a sharp eye to possible future demands.

When drugs *are* given, they should be prescribed in standard dosages the same as for sanatorium patients (December 1953 issue Virginia Medical Monthly).

Unfortunately it is true that greater cooperation from patient and family must be cultivated where systemic rest alone is prescribed than when a more liberal schedule is instituted from the beginning—made possible by concurrent use of drug therapy.

In instances where a patient is given drug therapy primarily because his daily expenditure of energy cannot be adequately controlled otherwise, there is laid bare an elementary lack of understanding *or* capacity for self-discipline (or both) which tends to adversely affect ultimate prognosis under *any* form of treatment. Too often there comes a time sooner or later in the treatment “career” of *many* patients when rest schedules must be temporarily deliberalized. It is an all too common experience of those specializing in tuberculosis to note that patients whose *earlier* treatment called for but vague, perfunctory performance in the field of systemic rest were handicapped, sometimes disenchanted, even rebellious, when at an eleventh hour a more stringent regime was prescribed requiring a high degree of self control and unflinching discipline—for which the patient was wholly unprepared—psychologically even more than physically.

Careful orientation of every patient and family, *from the very beginning*, upon basic facts of tuberculosis and its principles of treatment, is a key stone upon which can be built intelligent and willing cooperation upon the part of all to carry out *whatever* treatment regime may from time to time be prescribed, *rigid* or liberal. Cheerful and consistently purposeful cooperation almost invariably will enhance likelihood of complete and permanent cure, whether or not drugs are administered in or outside a sanatorium. Public Health Nurses are being trained to assist the practicing physician in the carrying out of effective orientation programs for patients of all levels of intelligence and with every kind of background.

Needless to say, to orientation in basic facts about tuberculosis *as a disease*, and its principles of treat-

ment, must be added an intelligent consideration of emotional, social, domestic and *financial* problems which commonly beset many people even in perfect health but which must be resolved without delay when a patient and family are faced with serious and prolonged illness.

Among those medically eligible for non-sanatorium care are the large number of discharges from sanatoria. While judgment may vary between physicians as to optimum time for discharge, both on general principles and as applied to individuals, it can safely be assumed that patients permitted to go home on medical advice are, for the most part, no longer in need of institutional care as such, but almost invariably, under any practicable discharge plan, they *do* require *further* treatment of some type *for tuberculosis* upon return to place of residence. Being in need of additional therapy, they are to be regarded as having active disease demonstrable or presumed. This may or may not coincide with their “official” sanatorium classification of activity status at time of discharge. Certainly by comparison with the “apparently inactive” case (see September and October issues, Virginia Medical Monthly), no longer required to take *any* treatment, their residual tuberculous lesions upon discharge constitute a continuing, albeit constantly diminishing hazard to health or life, until such time as they can qualify for reclassification. To retain patients regularly in sanatoria until no longer in need of any treatment whatever is necessary, impracticable and prohibitively costly.

As a matter of fact many if not most patients are still on drug therapy upon discharge in addition to a definitely prescribed rest schedule. Some take pneumoperitoneum, *also* in and of itself presumptive evidence of active disease.

Non-sanatorium treatment during the first few months following discharge normally should conform to recommendations made by the sanatorium staff.

\* \* \* \* \*

Upon one of the darkest pages in the history of tuberculosis is the roster of the many, many *curable* patients who took only enough systemic rest to keep from dying (too soon) in the days when systemic rest was the only known widely used therapeutic agent.

Later thoracoplasty, pneumothorax, phrenic nerve operations, and pneumoperitoneum were extensively employed, which enabled more people to get half well sooner.

Today newly introduced anti-tuberculosis drugs and modern excisional therapy make possible *incomplete* cure of additional thousands even more quickly and with less effort.

One might even go so far as to say that comparatively few persons have *ever* succumbed to tuberculosis in and of itself. Those who have failed to get well almost invariably have done so because of *be-lated, half-hearted* or *mis-directed* efforts to get well.

On the other hand one should hastily add that many, many patients have gotten completely and permanently well under *each* of the treatment regimes enumerated, when added to an appropriate schedule of systemic rest. However, the not too flattering record *as a whole* does point up the importance of attending physicians generally familiarizing themselves thoroughly with the relatively simple principles and practical problems involved in the treatment of the average newly diagnosed case of active pulmonary tuberculosis, *independently* of medicinal

and surgical adjuvants at their disposal.

At least 90% of patients diagnosed reasonably early, with or without symptoms, who, during course of treatment, consistently do the *right* things at the *right time* and *long enough*, cannot help but get completely and permanently well. That is to say they can look forward to leading a perfectly normal life indefinitely, without undue risk of relapse. *All of this without drugs!* Drugs and modern surgery, *used properly*, as adjuvants where indicated, can, of course, speed up the healing process *tremendously*.

When treatment proves to be inadequate, there is small consolation in the knowledge that prescribed therapy included the latest medicinal and surgical aids. When treatment *is* adequate, it *should* be a satisfaction to know that success has been achieved, in *most* instances, at *minimum cost* in time, money, and *human misery* to the patient and to his community, with or without drugs, with or without surgery, in or outside a sanatorium.

---

#### Notes from National Tuberculosis Association.

The steady reduction in mortality rates of tuberculosis is, in no small measure, due to social advances and to great achievement of preventive no less than therapeutic measures. Philip Ellman, M.D., J. of Royal Institute of Pub. Health & Hygiene, August, 1954.

---

Routine chest roentgenograms for patients admitted to the hospital are more productive than a routine survey on a general population of essentially normal persons. Figures vary tremendously according to the type of hospital, the type of patients admitted, and the care with which the roentgenograms are studied and reported by the roentgenologist. Morris H. Levine, M.D., and Stanley Crosbie, M.D., J.A.M.A., Sept. 18, 1954.

---

The importance of the tuberculin test in the program for the elimination of tuberculosis cannot be

overestimated. The percentage of positive tuberculin reactors is an indirect measure of the amount of undetected open tuberculosis in the community. The presence of a positive tuberculin test pinpoints the individuals which comprise the group in which new active cases will develop. The discovery of a recent conversion from a negative to a positive tuberculin reaction means that there is a known or unknown active case among the converter's associates. David T. Smith, M.D., J. School Health, Sept., 1954.

---

There has been a striking change in the tuberculosis picture over the past 25 years. A marked shift from female to male and also towards the older age groups both regarding morbidity and mortality has occurred. Tuberculosis is becoming increasingly a disease of people over 50 years of age and especially is this so in respect to males. G. C. Brink, M.D., Canadian J. Pub. Health, May, 1954.

## MENTAL HEALTH

JOSEPH E. BARRETT, M.D.

*Commissioner, Department Mental Hygiene and Hospitals*

### Inservice Training of Attendants at Lynchburg Training School and Hospital\*

It is a well known fact that training and education make a better employee in any type of work. The care of the mentally ill, mentally deficient, or epileptic patient requires a special type of training that cannot be obtained in general education or training centers. With the awareness of this factor and that trained personnel can be of more benefit to the patient and to the operation of the hospital, the Department of Mental Hygiene and Hospitals, through the Director of Nursing Education, has developed a training program for the nursing service personnel employed by the mental hospitals and the training schools.

The basic principles of the training programs for both the mental hospitals and training schools are the same. However, certain phrases of the training is adapted to the type of hospital in which the attendants are employed and are being trained. In September 1952, the Department of Mental Hygiene and Hospitals approved a revised program of training at the Lynchburg (Colony) Training School and Hospital for attendants and attendant trainees.

Believing that a knowledge of the training received by attendants will alleviate family anxiety during care and treatment, the following outline of attendant training is presented by the author, as prescribed by the Department.

The purpose of this training program is to improve the standard of patient care within the mentally retarded institutions by training a group of nursing service personnel who will have the necessary understanding, knowledge and skills to contribute to the effective care of mentally retarded patients.

The program consists of 115 hours which includes both ward and classroom work, with audio-visual aids and field trips when this can be arranged. The present curriculum is divided into eleven courses with a definite number of hours allocated to each course.

Instruction of an attendant begins with the employment interview where the applicant is given detailed information concerning his work and what is expected of him. At this time, the instructor also

gives him one-hour of instructions on the type of patients we care for, protection and treatment of the patient, fire prevention and control, personnel policies and personal hygiene. He is also given a manual of information to read before he reports back to the hospital for work.

During his first working days he goes into the orientation class where he spends ten hours. The objectives of this course may be listed as following:

1. To give new employees a broad and correct understanding of the functions of the hospital, its policies and physical plant.
2. To facilitate the adjustment of the employee to the hospital, to help him feel secure in his environment and to help him function in an effective manner.

On completing the orientation course each attendant is placed in another course being taught at that time.

The remaining courses and hour requirements for each are listed below:

1. Anatomy and Physiology—12 hours.
2. Environmental Therapy or Ward Housekeeping—5 hours.
3. Practical Nursing Care—25 hours.
4. Elementary Bacteriology—10 hours.
5. Food Handling and Sanitation—5 hours.
6. Understanding the Well Adjusted Person—10 hours.
7. Nursing Care of Mentally Retarded Child in School for Mentally Retarded—12 hours.  
Nursing Care of Epileptic Patient—4 hours.  
Protective Nursing Measures—4 hours (20 hour course).
8. Tuberculosis Nursing—5 hours.
9. Nursing Care of Aged—5 hours.
10. Contributions of Other Departments to the Care and Rehabilitation of the Patient—8 hours.

The attendant training program comes under the Nursing Service but other departments in the hospital contribute a part to the teaching of the various courses.

The student is given hospital time to attend the classes but studies and does outside reading assignments on his own time.

\*Article prepared by Lillian A. Riddle, RN., Lynchburg Training School and Hospital, Colony, Virginia.



All employees, whether experienced or not, must take all courses. Examinations are given at the completion of each course; anyone failing must retake the examination or repeat the course, depending upon several factors.

Classroom records are kept on file of each attendant taking the courses. Efficiency records are also turned in on the attendant's ward work by the professional nurse who supervises all practical work.

When the attendant satisfactorily completes the prescribed course, a graduation exercise is held and he is awarded a certificate by the Department of Mental Hygiene and Hospitals, and is thereby quali-

fied and eligible for employment as a hospital attendant.

We feel that we have derived many benefits from this attendant training course. Not only has patient care been improved but it has helped to attract more desirable material for attendants.

We, also, believe in time that it will reduce the large turnover of attendants in our hospital system. Those attendants who do leave the services after they have attended classes will have a better attitude toward patient care in the hospital which will certainly promote better relationships between the hospital and the community.

---

## BOOK ANNOUNCEMENTS

**The Concepts of Schizophrenia.** By W. F. MC-AULEY, M.D. Belf., D.P.M., R.C.P.S.I., Principal Psychiatric Registrar, Downshire Hospital, Northern Ireland. With a foreword by John H. Ewen, F.R.C.P., D.P.M., Formerly Physician and Lecturer in Psychological Medicine at the Westminster Hospital. Philosophical Library, New York. 1954. 145 pages. Price \$3.75.

**Primer of Allergy.** A Guidebook for Those Who Must Find Their Way Through the Mazes of This Strange and Tantalizing State. By WARREN T. VAUGHAN, M.S., M.D., Richmond, Virginia. With illustrations by John P. Tillery. Fourth Edition. Revised by J. Harvey Black, M.D., Dallas, Texas. St. Louis, The C. V. Mosby Company. 1954. 191 pages. Price \$4.25.

**The Physician and His Practice.** Edited by JOSEPH GARLAND, M.D., Editor, The New England Journal of Medicine. Little, Brown and Company, Boston. 1954. xii-270 pages. 1954.

**Clinical Aspects of the Autonomic Nervous System.** By L. A. GILLILAN, Ph.D., M.D., Associate Professor of Anatomy, Graduate School of Medicine, University of Pennsylvania. Little, Brown and Company, Boston. 1954. xii-316 pages. With 42 illustrations. Cloth. Price \$6.50.

**The Scourge of the Swastika.** A Short History of Nazi War Crimes. By LORD RUSSELL OF LIVERPOOL, C.B.E., M.C. Philosophical Library, New York. 1954. xii-259 pages. With 16 pages of half-tone illustrations. Cloth. Price \$4.50.

**The Manual of Antibiotics.** 1954-1955. Preparations, Therapeutic Index, Generic and Trade Names, Producers. Prepared under the Editorial Direction of HENRY WELCH, Ph.D. Distributed by American Pharmaceutical Association, Washington, D. C. Medical Encyclopedia, Inc., New York, N. Y. 1954. 87 pages. Cloth. Price \$2.50.

**Uses of Wine In Medical Practice.** A Summary. Published by the Wine Advisory Board, San Francisco, California. 42 pages. This booklet is available to our readers by addressing the publisher.

**The Manual of Antibiotics.** 1954-1955. Preparations, Therapeutic Index, Generic and Trade Names, Producers. Prepared under the Editorial Direction of HENRY WELCH, Ph.D. Distributed by American Pharmaceutical Association, Washington, D. C. Medical Encyclopedia, Inc., New York, N. Y. 1954. 87 pages. Cloth. Price \$2.50.

This small book, prepared under the editorial direction of the well known authority on antibiotics, Henry Welch, is intended to serve physicians, pharmacists and nurses as a handbook for identification of the composition of the many antibiotic combinations on the market. The antibiotics are arranged alphabetically by their generic names and the trade names (with manufacturer) are listed with their generic equivalents. Indices of manufacturers with addresses, trade names, and generic names are included. In this way, a user of the book would check a trade name in the index and on the page noted would find this product as well as all other products containing the same antibiotic. This is a handbook and gives only very general indications for use. Specific therapy and doses are not included in the descriptions.

The alphabetical order for some strange reason is not adhered to throughout in spite of the author's intention. An occasional isolated example of omission of proprietaries was noted, and at least one case of a mistaken trade name. Physicians may find this book helpful if they have no other source for information of this type and are interested in comparing composition of proprietary products.

WARREN E. WEAVER

## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

### New Officers.

At the annual meeting in Washington, November 2nd, Mrs. Maynard R. Emlaw, Richmond, succeeded Mrs. K. W. Howard, Portsmouth, as president, and the following other officers were elected: president-elect, Mrs. Mervin W. Glover, Arlington; vice-presidents, Mrs. Lee S. Liggan, Irvington; Mrs. Cecil C. Hatfield, Saltville; and Mrs. Charles A. Easley, Danville; recording secretary, Mrs. J. W. Carney, Newport News; corresponding secretary, Mrs. Levi W. Hulley, Jr., Richmond; treasurer, Mrs. William C. Barr, Richmond; and directors, Mrs. Kalford W. Howard, Portsmouth; Mrs. J. L. DeCormis, Accomac; and Mrs. Paul Pearson, Warsaw.

Chairmen of Standing Committee are: Finance—Mrs. Luther C. Brawner, Richmond; Legislation—Mrs. Frederick L. Finch, Richmond; Organization—Mrs. Mervin W. Glover, Arlington; Program—Mrs. C. M. McCoy, Norfolk; Publications—Mrs. William S. Grizzard, Petersburg; Public Relations—Mrs. Eugene Grether, Alexandria; Revisions—Mrs. John R. St. George, Portsmouth; and Today's Health—Mrs. Forrest M. Swisher, Alexandria.

Special Committee Chairmen are: American Medical Education Foundation—Mrs. Delmas B. Jones, Norton; Bulletin—Mrs. J. R. B. Hutchinson, Arlington; Cancer Control—Mrs. Herman W. Farber, Petersburg; Civil Defense—Mrs. L. B. Waters, Lynchburg; Clipping Service—Mrs. Macey H. Rosenthal, Lynchburg; Leigh-Hodges-Wright Memorial—Mrs. Fletcher J. Wright, Sr., Petersburg; Mental Health—Mrs. Joseph R. Blalock, Marion; Nurse Recruitment—Mrs. Bernard H. Raymond, Norfolk; Research and Romance of Medicine—Mrs. Lee B. Martin, Arlington; Councilor to Southern—Mrs. K. W. Howard, Portsmouth; Jane Todd Crawford Memorial—Mrs. Edward S. Ray, Richmond; Historian—Mrs. Hawes Campbell, Richmond; and Parliamentarian, Mrs. Thomas N. Hunnicutt, Jr., Newport News.

### Petersburg.

The following officers were installed by Mrs. Carney C. Pearce, Jr., parliamentarian, at the meeting on October 26th: president, Mrs. Joe McCormick; president-elect, Mrs. Kirby T. Hart, Jr.; vice-

president; Mrs. Joseph P. Whittle; recording secretary, Mrs. Mark E. Holt, Jr.; corresponding secretary, Mrs. Francis Payne, Jr.; treasurer, Mrs. Philip Jacobson; historian, Mrs. Meade Edmunds; and board member, Mrs. Clyde W. Vick, Jr., retiring president.

Several interesting projects are being planned for the new year. Foremost among them is the establishing of a future nurses club in the high school for girls who are interested in nursing as a career. The auxiliary voted to establish a scholarship fund of \$200.00 a year. This is to start one girl each year and contribute to her expenses during her three year course. Mrs. N. F. Wyatt is chairman of this committee.

Members were asked to save children's clothes, that were in good condition, to be used by the Social Service Bureau.

Much interest is being shown in aiding the local chapter of the National Association for Retarded Children. There is a class for eight of these children and the auxiliary has sent \$15.00 to be used for equipment and plans to send more financial aid when needed. A Halloween party was given for the children and others are planned during the year. Mrs. Nelson Smith is in charge of this project.

MARGARET S. WHITTLE (MRS. JOSEPH P.)

### Pittsylvania Academy.

At the meeting of this Auxiliary on October 14th at Memorial Hospital in Danville, the following officers were installed: president, Mrs. G. V. Thompson, Chatham; president-elect, Mrs. H. R. Bourne, Danville; vice-president, Mrs. W. C. Fitzgerald, Danville; recording secretary, Mrs. James Beaton, Gretna; corresponding secretary, Mrs. Jesse Clore, Jr., Danville; and treasurer, Mrs. Clifford Gaddy, Danville.

The outgoing Philanthropy Chairman, Mrs. J. R. Eggleston, reported that one year scholarships have been given to three student nurses now in training at Memorial Hospital. It was voted to furnish capes for these nurses.

The following committee chairmen were appointed by Mrs. Thompson: philanthropy—Mrs. D. L. Arey; finance—Mrs. H. A. Wiseman, III; publications—Mrs. S. C. Hall, Jr.; program—Mrs. John Hooker; social—Mrs. Charles Easley, Jr.; Doctor's Day picnic—Mrs. Henry Langston and Mrs. W. E. Dickerson; parliamentarian—Mrs. J. R. Eggleston;

nurse recruitment—Mrs. John Marsella; health—Mrs. J. D. Beale; Bulletin—Mrs. W. L. Sager; Leigh-Hodges-Wright—Mrs. H. A. Wiseman, Jr.; Jane Todd Crawford—Mrs. E. B. Robertson; legislation—Mrs. Prentice Kinser; historian—Mrs. J. J. Neal; research and romance of medicine—Mrs. H. H.

Hammer; public relations—Mrs. John L. Clare; mental health—Mrs. L. R. Soper; and telephone—Mrs. C. W. Pritchett.

Following the business session, a delicious luncheon was served.

IDA H. HALL (Mrs. S. C. Jr.)

---

### Doctors Need Help.

One of the biggest problems of today's physician is the diseases resulting from frustration, loneliness and lack of occupation—diseases he cannot cure alone.

Dr. Robert J. Needles, St. Petersburg, Fla., said in the October 9th Journal of the American Medical Association that what is most needed for persons afflicted with this "modern pestilence" is "better understanding of life away from physicians' offices." "The medical profession, with all its progress, needs outside help on the problem of the emotionally ill, displaced, abandoned, chronically unhappy, or otherwise handicapped persons." "Physicians can suggest, they can advise, they can warn, but they cannot go with these persons into the community and lead them into new interests and new drives to demonstrate reasons for living." "This is, and must be, the responsibility of society. There is too much wastage of human resources in the communities' own back yards . . . new and stimulating opportunities must be furnished from outside the medical profession."

The physician does try to cure the patient who suffers chronic fatigue or ever-present stomach complaints, who forever seeks a cure and is made increasingly unhappy by each new medical miracle because "it seems not to apply to him." But all the doctor's efforts may not cure the illness caused by a "sick society"—by too much leisure time and not enough to do, by loss of old values, and by lack of support from other people. Although this patient's symptoms are quite real—he actually suffers headaches, insomnia, stomach pains, heart distress, and other complaints—the cause is not physical. Functional illness may be "a mask" to hide loneliness,

disillusionment, marital infidelity, or economic hardship. The trouble is "with man's conversion into a modern wanderer uprooted from his past, his old assurances and prejudices washed away and not replaced by a new solidity." Part of it is what Dr. Needles called "a loss of community," a loss of old values that used to rule moral behavior, and loss of the family and social support "that used to bolster persons in time of emotional stress." Changes in politics, economics, religion, and family life in the last few decades have left many "without any order of belief."

"Too many persons have been uprooted from their environment or have lost the sources of the reassurance that keeps persons in emotional balance. Many of them need only to reestablish themselves in a group to find again the reinforcing benefits of friends and neighbors." In these cases, churches, clubs, and lodges could help. More important, ways and means for developing new interests and skills are needed. These would fill the extra leisure hours made possible by advances in mass production and big business. When work time in the factory and at home is reduced, the person "has little on which to fall back in his need for useful activity."

Dr. Needles urged that nongovernmental agencies take an interest in providing tension relief, such as adult education classes in useful sparetime occupations, or local craft and hobby centers. "Not enough practical effort is being devoted to the most necessary thing, giving persons something to do, something they can do themselves, something that will not only serve to take their minds off their internal rebellions but will actually produce a visible and soul-satisfying result."



## EDITORIAL

## A Change in the Constitution

THE 1954 annual session of The Medical Society of Virginia witnessed the inauguration of a profound change of policy in that organization. The word *white* which has qualified membership in the Society for half a century was deleted from Article IV of the Constitution, thus permitting the election of physicians other than those of the Caucasian race.

Prior to 1902, no reference to race appeared in the Constitution or by-laws of the Society. In that year a resolution was presented to the House of Delegates proposing that the word *white* be inserted as a requisite for membership. After discussion and by vote the resolution was laid on the table where, despite several efforts to revive it, it continued to rest, as there is no record of its formal adoption. Nevertheless, in 1905 the word *white* mysteriously appeared in the printed Constitution, and has been retained there as well as in the component societies whose Constitutions must be in conformity with that of the state society.

As the number of licensed colored physicians in the state increased, it became more and more apparent that in excluding them from the advantages of scientific meetings, the Society was failing in its avowed purposes of promoting the science and art of medicine, the protection of the public health and the betterment of the medical profession. The year 1948 saw the beginning of a movement that led to the recent action of the Society. Under the presidency of Dr. M. P. Rucker, a committee composed of past presidents was formed and charged with the responsibility of investigating the problem of colored physicians and reporting to the Society with recommendations. The committee's report, received at the 1949 annual session, recommended that the word *white* be deleted from the Constitution and that component societies give careful consideration to the matter of accepting into their membership Negro physicians who are eligible according to standards of character, and professional ability, and such other requirements as seen desirable to the local society.

When presented to the House of Delegates, the committee's proposal received strong support but, failing to secure the two-thirds majority necessary to change the Constitution, was rejected. The committee was continued and at two subsequent meetings, 1950 and 1952, again recommended that the word *white* be deleted, but again missed the required majority by a few votes. Nevertheless, the matter had been brought to the attention of the profession in the state and became a popular subject of discussion. As conditions throughout the country changed and several Southern states moved toward lifting racial restrictions in their medical societies, it became obvious that Virginia would soon follow.

Physicians of any race are now eligible to membership in The Medical Society of Virginia and through that to membership in the American Medical Association. However, membership in the state society is contingent upon membership in a component or local society. It follows, therefore, that the immediate effect of the change in the Constitution will depend upon the action of local societies, several of which have already accepted Negro physicians as members.

J.M.H.

## SOCIETY PROCEEDINGS

---

### Mid-Tidewater Medical Society.

At the meeting of this Society on October 26th, Dr. Thomas E. Smith, Hayes, was elected president; Dr. Carl Broadus, Newtown, president-elect; Dr. M. H. Harris, West Point, re-elected secretary; and Dr. William H. Hosfield, West Point, treasurer. A vice-president was elected from each county in the Society and they are: Drs. J. R. Gill, Mathews; Raymond S. Brown, Gloucester; Herman Bailey, Yorktown; J. F. Jones, Essex County; Edward Lewis, Bowling Green; A. W. Lewis, Jr., Aylett; A. L. Van Name, Urbanna; and J. R. Parker, Providence Forge.

The next meeting of the Society will be held in West Point on January 25th.

### Patrick-Henry Medical Society.

Officers for 1955 were elected at the meeting on October 8th and are as follows: President, Dr. F. T. Renick; vice-president, Dr. C. P. Sherman; and secretary-treasurer, Dr. T. H. Dickerson. All officers are from Martinsville.

Dr. Julian R. Beckwith, University of Virginia, presented an interesting paper on "Hypertension" at the scientific session.

### Northern Neck Medical Society.

Dr. Norman R. Tingle, Nuttsville, was elected president of this Society at a recent meeting, and Dr. J. M. Dailey, Reedsville, re-elected secretary.

### The Washington County Medical Society

Held its first meeting of the year at the Martha Washington Inn in Abingdon on October 21st. The following officers were installed: President, Dr. J. S. Shaffer, Abingdon; vice-president, Dr. Catherine Smith, Abingdon; and secretary-treasurer, Dr. J. M. Suter, Abingdon.

Although the membership of this group is small, there being only seventeen members, some of the outstanding accomplishments during the year are: immunization of over 7,000 children with gamma globulin in order to combat a serious poliomyelitis epidemic which was existing in July of 1953; the immunization of nearly 500 second grade children with three inoculations of the Salk vaccine and also the drawing of blood specimens twice in 1954; and the furnishing of medical coverage for all visits of the blood mobile from the Roanoke Blood Center in the County during 1953-1954.

### Williamsburg-James City Medical Society.

At a meeting of this Society on November 10th, Dr. James F. Conner, secretary-treasurer of the Virginia Diabetes Association and chief of professional services at the VA Hospital, Kecoughtan, spoke on Cancer Detection.

### Warwick-Newport News Medical Society.

At the October meeting of this Society, Dr. John B. Truelow, Dean of the School of Medicine, Medical College of Virginia, spoke on Problems of Intern and Resident Training in Hospitals Not Associated with a Medical School.

At the November meeting, Dr. Barnes Gillespie, Newport News, spoke on The Survey of Thirty-One Severe Back Injuries for Nine Months of 1954.

Dr. William A. Read, Newport News, is president of this Society, and Dr. F. Ashton Carmines, also of Newport News, is secretary-treasurer.

### The Hanover County Medical Society

Has been reactivated and the following officers named: President, Dr. John Hamner, Jr., Ashland; vice-president, Dr. J. A. Wright, Jr., Doswell; and secretary-treasurer, Dr. Claude Kelly, Mechanicsville.

---

## NEWS

### CALENDAR OF COMING EVENTS

- EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, December 6.  
Dr. William G. Hardy, Johns Hopkins Hospital, "Hearing and Language Disorders in Young Children"
- SECOND ANNUAL CONFERENCES ON THERAPY—University of Virginia Medical School, December 10, 9:00 a.m.-5:00 p.m.
- EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, December 13.  
Dr. Joseph E. Smadel, Walter Reed Army Medical Center, "Current Problems in Virology"
- ANNUAL CONGRESS ON OBSTETRICS AND GYNECOLOGY—Palmer House, Chicago, December 13-17
- TRI-STATE MEDICAL ASSOCIATION—Hotel Chamberlin, Old Point, Va., February 21-22
- NATIONAL CONFERENCE OF RURAL HEALTH—Schroeder Hotel, Milwaukee, Wis., February 24-26
- INTERNATIONAL ACADEMY OF PROCTOLOGY—The Plaza Hotel, New York City, March 23-26
- EASTERN STATES HEALTH EDUCATION CONFERENCES—New York Academy of Medicine, New York City, April 21-22

#### First Interstate Scientific Assembly

The 1954 Annual Meeting of The Medical Society of Virginia was held in Washington, October 31-November 3, and will be written into the annals of the Society as one of the most memorable meetings in its history.

Known this year as the First Interstate Scientific Assembly, the meeting was held jointly with the Medical Society of the District of Columbia, and lived up to its advance billings as an important and historic event.

Perhaps the most important single development was the precedent-shattering decision of the House of Delegates to amend the Society's Constitution by deleting the word "white" from Article IV. This momentous decision, commented on editorially elsewhere in these pages, was ratified by a general meeting of the Society's membership—the vote being 166-101.

From the scientific point of view, the program was one of the most attractive ever held in this area. Its appeal was reflected in the total registration of 3,335—of which 2,001 were physicians. The following breakdown tells the complete story.

Virginia Physicians -----	717
D. C. Physicians -----	1,284
Auxiliary -----	266
Guests -----	1,068
	-----
	3,335

The Medical Society of Virginia can be proud of the award bestowed on Dr. Roy M. Hoover, Roanoke, as the Virginia physician who made the greatest contribution to the physically handicapped during the year. The presentation was made by General Maas, Chairman of the President's Committee on Employment of the Physically Handicapped.

By way of proving the old adage about "All work and no play . . .", an unusually complete calendar of social events was featured. The annual banquet needed three banquet halls to accommodate the "overflow" attendance which threatened the 1,000 mark. "Skitsophrenia", the home talent show featuring physicians and their wives, played to a "standing room only" audience of over 900.

The meeting marked the installation of Dr. Carington Williams as President of the Society and Mrs. Maynard R. Emlaw as President of its Woman's Auxiliary.

Elected to office were Dr. James P. King, President-elect; Dr. James W. Love, First Vice President; Dr. Waverly R. Payne, Second Vice President; Dr. Benjamin W. Rawles, Jr., Third Vice President; and Robert I. Howard, Executive Secretary-Treasurer. The following are Councilors: Dr. A. A. Creecy, Dr. Walter P. Adams, Dr. Guy W. Horsley, Dr. Wilkins J. Ozlin, Dr. Louis P. Bailey, Dr. Frank A. Farmer, Dr. Harold W. Miller, Dr. McLemore Birdsong, Dr. James P. Williams, and Dr. Harry C. Bates, Jr. Dr. Vincent W. Archer was elected Dele-



gate to the American Medical Association and Dr. Allen Barker, his Alternate.

#### **Dr. A. I. Dodson,**

Richmond, addressed the Tennessee Valley Medical Assembly in Chattanooga, September 27-28. His subject was "Youth and Abuse of Antibiotics in Infections of the Urinary Tract".

Before returning home, Dr. and Mrs. Dodson spent a week at Gatlinburg, Tennessee.

#### **Dr. M. J. W. White,**

Luray, was a forum speaker at the Baptist Youth Forum in Stanley during October. A series of discussions was held on "Careers for Youth" and Dr. White's subject was "Medicine".

#### **Licensed Physicians in Virginia.**

A roster of licensed physicians in Virginia has been released by Dr. K. D. Graves, Secretary of the State Board of Medical Examiners. There were 2,980 registered as of July 1st. This is an increase of 86 over 1953 and an increase of 407 in the last seven years.

#### **Dr. Arthur H. Taylor,**

Recently of Brownsburg, is now located in Suffolk where he will share offices with Dr. W. H. Michael in the general practice of medicine.

#### **Drs. William H. Higgins, Sr. and Jr.,**

Announce the removal of their offices to 3540 Floyd Ave., Richmond.

#### **New Urological Association.**

The Valley of Virginia Urological Association was organized in July at a meeting in Staunton. Charter members are Drs. Richard H. Lowe, Jr., Roanoke; Christopher Stuart, Jr., Winchester; Samuel Graham, Staunton; C. I. Sease, Jr., Harrisonburg; Thomas B. Baer, Bluefield, W. Va.; J. G. Warden, Hagerstown, Md.; E. W. Kirby, Jr., Bluefield, W. Va.; and Frank N. Buck, Jr., Lynchburg.

Dr. Stuart was elected temporary chairman of the group and Dr. Sease temporary secretary. Meetings will be held quarterly.

#### **Dr. Brent Honored.**

Dr. Meade S. Brent, superintendent of Central State Hospital, Petersburg, was one of three employees of the state mental hospitals who was honored at a testimonial dinner held in Richmond October 13th. Dr. Brent has been superintendent in

Petersburg since 1938 and he has asked to be retired as soon as a successor can be found. He is seventy-three years of age.

#### **Dr. Cottrell Promoted.**

Dr. James E. Cottrell, chief of professional services at the Veterans Administration Hospital in Richmond, has been promoted to manager of the 1100-bed Hospital, succeeding Dr. Glen W. Doolen who resigned in September.

#### **A.M.A. Deadline for Papers and Exhibits.**

The Council on Scientific Assembly of the American Medical Association announces the deadline for those who wish to participate in the Atlantic City meeting, June 6-10, 1955. For section papers, this is December 15, and for scientific exhibits it is January 10th. Applicants should communicate with the Secretary or the Representative to the Scientific Exhibit of the Section in which they are interested. Further information may be obtained from the Secretary, Council on Scientific Assembly, American Medical Association, 535 North Dearborn St., Chicago 10.

#### **Dr. Paul Hogg,**

Newport News, has been elected president of the Peninsula Chapter of the Virginia Society for Crippled Children and Adults.

#### **Seminar on Ophthalmology and Otolaryngology.**

The ninth annual University of Florida Midwinter Seminar in Ophthalmology and Otolaryngology will be held at the Sans Suci Hotel in Miami Beach the week of January 17, 1954. The lectures on ophthalmology will be presented on the 17th-19th, and those on otolaryngology the 20th-22nd. A midweek feature will be the Midwinter Convention of the Florida Society of Ophthalmology and Otolaryngology on the afternoon of the 19th to which all registrants are invited.

Full information may be obtained from Dr. Shaler Richardson, 111 West Adams Street, Jacksonville, Florida.

#### **New Hospital Pavilion at Jefferson.**

The Jefferson Medical College, Philadelphia, has just completed a new fourteen-story \$7,500,000 hospital pavilion as an addition to the present hospital and medical teaching facilities. The formal opening ceremony was held on November 8th and a series

of events and tours were held for the next two weeks.

This 300-bed, ultra-modern addition, will accommodate approximately 8,500 additional patients yearly. There are seven nursing floors with one devoted exclusively to maternity patients, with optional "rooming in" maternity service, enabling babies to occupy adjoining area to mother's bed. All patient rooms have attractive views of the city by virtue of their top location on the building. Each has its own toilet facilities and oxygen is piped into each room. Voice stations at each bedside will enable patients to converse with their nurse at her station. A televoice station also allows doctors to dictate reports from many locations to a central automatic recording station.

Fourteen operating rooms on two floors make it possible to centralize all operating work in the new building. Expanded radiology and clinical laboratories also occupy individual floors. Another floor for gynecology and obstetrics includes four operating rooms, four delivery rooms and three labor rooms.

Solaria at the nursing floor levels high above the ground with cantilevered open air balconies face the south and north. A covered roof terrace for convalescent patients crowns the pavilion.

#### **Dr. Rea Honored.**

Dr. Montie L. Rea, who has been practicing in Albemarle County for fifty years, was honored recently at the Martha Jefferson Hospital, Charlottesville, for his half-century service. His portrait was presented to the hospital and will be hung in the lobby.

#### **Dr. W. Taliaferro Thompson, Jr.,**

Richmond, was installed as vice-president of the Davidson College Alumni Association at its twenty-ninth homecoming on October 30th.

#### **Dr. L. W. Hulley, Jr.,**

Richmond, has been appointed medical advisor to the State Industrial Commission, succeeding the late Dr. J. Fulmer Bright.

#### **Officers of Virginia Medical Service Association.**

Dr. H. Grant Preston, Harrisonburg, has been re-elected president of this Association and Dr. Claude A. Nunnally, Fredericksburg, has been named chairman of the board of directors. Dr. Benjamin W. Rawles, Jr., is vice-president, and Dr. D. Edward Watkins, Waynesboro, is secretary. Dr. Wilkins J.

Ozlin, South Hill, was elected a member of the board of directors and the following doctors were re-named members: Dr. Russell M. Cox, Portsmouth; Dr. H. B. Holsinger, Farmville; Dr. Herbert C. Jones, Petersburg; and Dr. Herbert D. Wolff, Jr., Alexandria.

#### **For Sale.**

Complete office equipment, including fluoroscope, two sterilizers, metabolism machine, etc., in excellent condition. Owned by general practitioner, recently deceased. Contact Mrs. J. Edward Amiss, Altavista, Va. (*Adv.*)

#### **For Sale.**

My home with attached office on Queen's Creek in Mathews County. Nine rooms with three baths. Boat dock and double garage. Office suitable for guest wing. Desirable location for dentist. Reasonable priced. Can be financed. Dr. H. L. Shinn, Hallieford, Virginia. Phone—Mathews 5-3441. (*Adv.*)

#### **For Sale.**

On the Eastern Shore, 10-room house and garage on lot 85 x 140 in town, office and waiting room included. House in excellent condition, steam heat, hardwood floors. Now occupied by physician who is leaving. Buyer steps into a \$8,000-\$10,000 practice. Priced \$10,000 for quick sale. Occupancy about February 1st. Address #25, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

#### **Opportunity for EENT Surgeon.**

Beautiful suite of office rooms, located in recently constructed doctors' office building. Offered for sale or rent by specialist retired because of poor health. Fully equipped. Adjacent to 49 bed hospital, association with 5 general practitioners and surgeons. Population of town 14,000. No other local specialist. Rooms also suitable for dentist. Phone 2-9851 or 4011, Elizabethton, Tennessee. (*Adv.*)

#### **For Rent.**

Doctor or dentist office. 2716 Grove Avenue, near Boulevard, Richmond. Will decorate. \$100.00. H. T. Richeson & Company, 1007 East Main Street, Richmond. Phone 3-9111. (*Adv.*)

#### **For Rent.**

Excellent opportunity for physician just outside

Washington in expanding community of Alexandria. Complete 5-room house available for use as office in area needing services of a physician. Owners will-

ing to assist doctor in getting started. Telephone Mr. Charles Gerstain, Temple 6-9378, Washington, D. C., for appointment. (*Adv.*)

---

## OBITUARIES

---

### **Dr. William Leven Powell,**

Prominent physician of Roanoke, died October 22nd, at the age of seventy-eight. He had been in failing health for several years but was active in practice until the day before he died. Dr. Powell was a native of Winchester and graduated in medicine from the University of Virginia in 1900. He had practiced in Roanoke for forty-eight years and was superintendent of the Roanoke Hospital (the present Memorial and Crippled Children's Hospital). Dr. Powell was several times chief of the staff at the hospital and was one of the organizers of the outpatient department. He was the first president of the Virginia Academy of General Practice and also served as president of the Roanoke Academy of Medicine. Dr. Powell had been a member of The Medical Society of Virginia since 1909 and was named its president in 1947. He had always been active in the work of the Society, having served on the Council and numerous committees. He was made a Life Member in 1950. Mrs. Powell and a son survive him.

### **Dr. Robley Duglison Bates, Sr.,**

Beloved physician of King and Queen County, died at his home in Newtown on October 22nd. He was seventy-nine years of age and a graduate of the Medical College of Virginia in 1906. Dr. Bates was prominent in the civic affairs of his county and a Mason. He served for many years on the Virginia State Board of Medical Examiners and was a president of the Mid-Tidewater Medical Society. Dr. Bates had been an active member of The Medical Society of Virginia for forty-eight years. He was named President of the Society in 1934. He is sur-

vived by his wife and a son, Dr. R. D. Bates, Jr., of Richmond.

### **Dr. George Hopkins Carr, Sr.,**

Dean of Portsmouth physicians, died October 10th, after an illness of several weeks. He was seventy-nine years of age and a graduate in medicine of the University of Maryland in 1896. Dr. Carr had been a member of The Medical Society of Virginia for fifty-five years and was named a Life Member in 1948. His wife and three sons survive him. One son is Dr. G. H. Carr, Jr., of Portsmouth.

### **Dr. Joseph Gates Goode,**

Well-known physician of Cheriton, died October 24th. He was seventy-eight years of age and graduated from the former University College of Medicine, Richmond, in 1899. Dr. Goode had practiced in Cape Charles since 1900 and had retired only a few weeks ago. He had been a Mason for more than fifty years and was active in the work of his local medical society. Dr. Goode has been a member of The Medical Society of Virginia since 1899 and was made a Life Member in 1949. A sister and three grandchildren survive him.

### **Dr. Homer Amos Spitler,**

Mayor of Middleburg, died October 15th, at the age of seventy-five. He graduated from the former University College of Medicine, Richmond, in 1903. Dr. Spitler practiced in Middleburg for fifty years and had served as Mayor of the town since September 1953. He was active in the civic affairs of his county, a member of the board of directors of the Loudoun Hospital, and a member of the Loudoun County Medical Society. Dr. Spitler was a Life Member of The Medical Society of Virginia, having



joined in 1903. His wife survives him.

The following resolutions were adopted by the Loudoun County Medical Society:

WHEREAS God Almighty in His wisdom has removed from our midst our friend and brother practitioner, Dr. Homer A. Spitler.

WHEREAS Dr. Spitler was a practitioner of medicine for many years in Loudoun County.

WHEREAS Dr. Spitler practiced medicine in Loudoun County at a time when the winters were rigorous, the roads were impassable, hospital facilities unavailable and consultations with specialists difficult and sometimes unobtainable.

WHEREAS Dr. Spitler, under the most trying conditions, exhibited an intelligence, a resourcefulness and a skill which reflected great credit upon him.

WHEREAS Among the many beautiful and inspiring attributes which Dr. Spitler possessed, his great humanitarianism, his reassuring calm, his placid confidence, his unalloyed kindness, his infinite tact, his unswerving geniality, his constant warmth, his personal attractiveness, and his extraordinary devotion to duty shone with a rare luminosity.

THEREFORE, BE IT RESOLVED that a copy of these resolutions be spread upon the minutes of the Loudoun County Medical Society, a copy be sent to each of the newspapers of the county, a copy be sent to The Medical Society of Virginia and a copy be sent to his bereaved wife for whom all of the members of this Society entertain the deepest, most heartfelt and sincere sympathy.

W. O. BAILEY

### Dr. Louis Allen McAlpine,

Prominent surgeon of Portsmouth, died October 17th after a long illness. He was a native of Richmond and sixty years of age. Dr. McAlpine graduated from the Medical College of Virginia in 1916. He was active in bringing about the construction of the Maryview Hospital in Portsmouth and was head of the medical department until he retired because of ill health. An Editorial in the Portsmouth Star stated that "Portsmouth . . . has not only lost one of its able physicians and surgeons but a citizen who had faith in the community and did much for its building in the past quarter-century." His wife and two sons survive him.

### Dr. George Andrew Wright,

Former superintendent of Southwestern State Hospital and founder of the Lee Memorial Hospital, Marion, died October 28th. He was seventy-three years of age and a graduate of the former University College of Medicine in 1904. Dr. Wright was superintendent of Southwestern State Hospital from 1926 to 1937 and founded the Lee Memorial Hospital in

1939. He had been a member of The Medical Society of Virginia since 1904 and would have received his certificate of Life Membership at the annual meeting in Washington on November 2nd. His wife and two sons survive him.

### Resolution on Dr. Lehman

Dr. Edwin Partridge Lehman, retired Chairman of the Department of Surgery which he headed for over twenty-five years, died in Boston, May 27th, aged 65.

He was born in Germantown, Pa., June 9, 1888, was a graduate of Williams College, 1910, and received his medical degree from Harvard in 1914, being a John Harvard Fellow in his senior year. After interning at Peter Bent Brigham, he took three years of Postgraduate training at Barnes Hospital, St. Louis. Following two years of service during World War I as a First Lieutenant in the Army Medical Corps he joined the faculty of Washington University and rose from Instructor to Professor in six years. In 1928 he came to the University of Virginia as Professor of Surgery and Chairman of the Department, retiring in June, 1953 as Chairman, but serving as Consultant until his death.

Among the many honors Dr. Lehman received were the Major G. Seelig Lectureship at Washington University in 1949, and the William J. Mayo Lectureship at the University of Michigan in 1951. Very active in cancer work, he assumed the Directorship of the McIntire Clinic in 1936, was Director of the Virginia Cancer Foundation from 1940-44, and was President of the American Cancer Society in 1947-48, receiving the John Shelton Horsley Award for cancer education in Virginia in 1948. Other organizations in which he was active are the American Surgical Association of which he was Vice-President in 1946, and the Southern Surgical Association, President in 1948. A member of the Founders Group of the American Board of Surgery, he was also a member of the International Surgical Society, the American College of Surgeons, the American Association for the Surgery of Trauma, and an honorary member of the Society of University Surgeons. In the Southern Medical Association he was Chairman of the Section on Surgery in 1933, and Chairman of the Section on Medical Education in 1944.

Membership in honorary societies included Phi Beta Kappa, Alpha Omega Alpha and Sigma Xi.

Beloved by his students and interns and resident staff, Dr. Lehman was given a testimonial dinner in 1948, commemorating twenty years of teaching at the University, which was attended by former residents from all over the United States. His chief interest was in teaching, and he was never too busy to impart his vast fund of knowledge to those who asked. An avid reader of all worthwhile literature, not merely medical, he was a ready "source book" on the most recent developments in all medical fields. This was exemplified daily in his teaching and ward round groups where his active well-informed mind kept all of those present mentally alert.

Dr. Lehman during his long service left an indelible

imprint on the organization and teaching of Surgery in the Medical School. His scholarly untiring efforts to better all medical instruction will be sorely missed.

THEREFORE BE IT RESOLVED that the Albemarle County Medical Society expresses its sense of deep feeling and regret at the passing of this master teacher.

AND FURTHERMORE BE IT FURTHER RESOLVED that this resolution be spread upon the minutes of this Society, that copies be sent to his family and to the Virginia Medical Monthly.

WILLIAM P. PARSON, M.D.

FLETCHER D. WOODWARD, M.D.

VINCENT W. ARCHER, M.D., *Chairman*

## An Appreciation of Dr. Howell.

Dr. Paul Williamson Howell, a member of this Academy for 46 years, died July 26, 1954. He was blessed with a happy childhood, born and living on a prosperous and well run plantation in Sussex County, and his memory was filled with happy associations of that time. Later on he attended William and Mary College, where he received the Phi Beta Kappa Key and the glamour of those ideal days stayed with him through life. He graduated in medicine from the University College of Medicine in 1898 and went to work at Mt. Carbon, in the coal fields of West Virginia. He came back in 1900 to marry the lovely Adeline Green of this city; taking his bride back to the hills and, for the next eight years, continued practice in West Virginia. Richmond always called him, and he returned here in 1908 to live a long and happy life as a general practitioner of medicine. Many years ago he was appointed as assistant to the late Dr. W. S. Gordon, as medical attendant to the City Jail. He succeeded to the full position on Dr. Gordon's death and carried out the duties of this office with meticulous care.

Dr. Howell was conservative, in all the best this term implies. He attained to much special knowledge, but in the limits of general practice. Specialization always seemed to him an unnecessary sacrifice of his own concept of himself as a physician. For instance, his knowledge of surgery was such as to his becoming a member of the American College of Surgeons in Gynecology. At one time he became interested in cystoscopy and did considerable work in this field and did it well. In life insurance examinations he was an authority.

In organizations he seemed to be that type of man who was content to work back-stage. To illustrate, he held no post at William and Mary College, but he was an intimate of its presidents and knew and discussed with them all the plans for the tremendous growth of that institution.

It was in the realm of human relations that he excelled, with the urge to convert the most casual occasion into a gay celebration. In the out-of-doors he fished and golfed, but it was always more the companionship of the sport than the game itself, a smile on the face of a friend meaning far more than a low score.

As a host in his own home he was supreme. As a connoisseur of good living, there was literally nothing he

could do for a guest in food or drink which did not receive his personal attention. His welcome was a heart warming thing and his farewells made one feel that in participating in his hospitality a great favor had been done him. No doctor had more of the clergy as patients and friends, and as a devout churchman he went to his end with a peculiar fortitude.

A devoted husband and father, the consuming desire of his last days was to protect those whom he loved from that which he knew to be inevitable, and by manner and speech, he suppressed that which he bodily endured.

God rest, a very splendid gentleman.

ELAM C. TOOME

A. STEPHENS GRAHAM

THOMAS W. MURRELL

## Dr. Delarue.

The Richmond Academy of Medicine records with sorrow the death of Edward A. Delarue, junior, on 19 September, 1954, in Richmond, who suffered thrombosis of a coronary artery while examining a patient in a local hospital. Dr. Delarue was 47 years of age and a native of Richmond. After graduation from McGuire's University School, he attended the University of Virginia, receiving first an academic degree, and subsequently a doctorate in medicine in 1933. While at the University he was elected to membership in the Raven Society (scholastic honor society), Phi Beta Kappa, and Alpha Omega Alpha Societies. He also enjoyed athletics, running the distance races on the track team.

Dr. Delarue's post-graduate training was extensive, beginning with an internship at the Peter Bent Brigham Hospital in Boston and being continued at the Willard Parker and King's County Hospitals in New York. He then traveled in Europe, visiting clinics and medical schools. After his return to Richmond he opened his office for the practice of internal medicine, and joined the staff of the Medical College of Virginia working in the department of medicine.

Dr. Delarue was a diplomate of the American Board of Internal Medicine with a certificate in the sub-specialty of cardiology. He was a member of his state medical society, the American Medical Association, and a Fellow of the American College of Physicians.

In World War II Dr. Delarue was commissioned Captain in the Army Medical Corps and was a member of the 45th General Hospital when activated at Camp Lee in May 1942. The Staff of Officers of general hospitals at this time was reduced by the Surgeon General, and so several officers were detached to other units. Captain, later promoted to Major, Delarue subsequently served four years in the 220th Station Hospital. Following his separation from the Army he became a member of the attending staff at McGuire (Veterans Administration) General Hospital, and resumed his practice of internal medicine and his association with the Medical College of Virginia.

A measure of his intellectual level is provided by the scholastic honors which he won at the University of Vir-

ginia. The depth and broadness of his learning are evident by his desire to undergo not one but all of the examinations in the sub-specialty groups offered by the American Board of Internal Medicine. However, to his disappointment, he was permitted to take only one sub-specialty examination and selected cardiology as his chief interest. In his practice his work was characterized by meticulousness of extreme degree, his clinical notes were precise and complete, and his observations logical and clearly expressed. His skepticism of all new (and unproven) theories and fads in medicine was admirable and a healthy counterbalance to the reckless and uncritical enthusiasm of many of our present day medical writers.

Throughout the years of his practice he continued to be a student and devoted hours daily to systematic study of medical literature. However, his intellectuality was coupled with a strong sense of rectitude complementing a rare devotion to his family and patients.

Dr. Delarue is survived by his parents and a sister. The Richmond Academy of Medicine shares with them its loss and extends to them its heartfelt sympathy.

JAMES O. BURKE  
BEVERLEY B. CLARY  
M. M. PINCKNEY

### Resolution on Dr. Tabb.

John Lloyd Tabb was born in Baltimore, Maryland, of Gloucester County, Virginia, parentage November 17th, 1892. He was one of three children of John Lloyd Tabb, a lumber and hardware merchant, and his wife, Susan Selden Tabb . . . . .

Dr. Tabb attended McGuire's University School and later Woodberry Forest School. He entered the Medical College of Virginia in 1912 and graduated in the class of 1916. His colleagues refer to him as an outstanding student, careful and exacting in his understanding and application of medical facts. This attitude he continued to manifest in his distinguished career as a radiologist.

Following graduation he practiced two years at Midlothian, Virginia with another distinguished alumnus of the Medical College of Virginia, Dr. J. B. Fisher. This training in general practice was to give him a clinical perspective in radiology so valuable to any specialist.

. . . . .

In 1918 he enlisted in the United States Army and was assigned as First Lieutenant to Mobile Hospital Number I in France during World War I. He became attached to the radiology department and learned to dictate x-ray reports above the din of the gasoline powered electric generator in the field hospital. This characteristic impressive expostulation gave an authority to his speech which all respected. This was but one evidence of his summoning all of his powers to make a decision on an x-ray film. No matter how routine it might seem to others, each film was an exercise in precision of interpretation, a concentration of all his vast experience on a tiny segment of bone or the fascinating coil of a gastrointestinal series.

Because of his broadened and seasoned war experiences as a radiologist he was invited to join Dr. Alfred Gray at the close of the war. This association with Dr. Gray, who was the first full time radiologist at the Medical College and radiologist at St. Luke's Hospital, continued until Dr. Gray's death in 1932, when Dr. Tabb became chief radiologist at St. Luke's as well as conducting a large practice in the Medical Arts Building. In addition Dr. Tabb did radiology for Crippled Childrens Hospital and Pine Camp, Westbrook Sanatorium and in the offices of the Drs. Blanton.

On July 1st, 1952 he closed his private offices and moved to McGuire Clinic and St. Luke's Hospital where he became a partner and director respectively and worked there right up to within twenty-four hours of his death from coronary thrombosis September 1st, 1954.

In 1927 he married Miss Emily Chaffin Crockett, a St. Luke's nurse, who survives him. He is also survived by two sons. . . . .

Dr. Tabb was not a joiner nor did he seek public or even professional acclaim. He was satisfied by the esteem of his colleagues and in the service he could render them and their patients. That he was exceptionally competent in his field no one doubted. His signature on an x-ray report meant that the best interpretation of human eyes had been given.

. . . . .

He was past president of the Virginia Radiological Society, and was radiologist for the Seaboard Airline Railway Company. He was associate professor of Radiology at the Medical College of Virginia.

Dr. Tabb was a communicant of St. James Episcopal Church.

He was proud of his family and his hobbies were within his home where he maintained a fine wood-work shop. His summer home in Gloucester was his recreation.

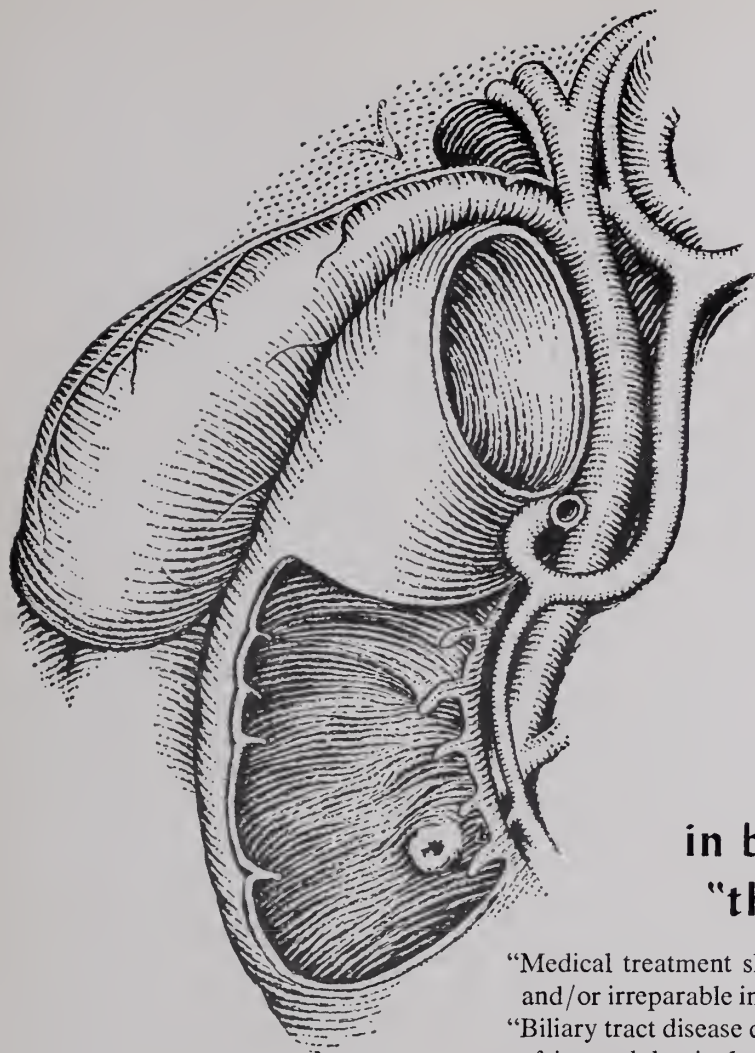
Dr. Tabb was a radiologic diagnostician with few peers. His respect for the roentgen ray for therapy was profound, and he never ceased to wonder how much harm it did to healthy tissues while he was treating the diseased. He was meticulous in his work and would not be hurried into short cuts, no matter how others tried to persuade him. His colleagues learned to find that in his field his judgment was unsurpassed. They will miss him for his terse accurate reports and his sympathetic understanding of clinical problems.

He had a sympathy for the needy and distressed. He never spoke ill of any one. He was loyal to his friends.

THEREFORE, BE IT RESOLVED that Virginia and Richmond have lost a distinguished radiologist and that the Academy of Medicine express its sympathy to his bereaved family and friends; that a copy of these resolutions be sent to his family, a copy spread on the minutes of the Richmond Academy of Medicine, and a copy sent to the Virginia Medical Monthly for publication.

E. LATANE FLANAGAN  
STUART J. EISENBERG  
JOHN P. LYNCH, *Chairman*





## in biliary stasis... "therapeutic bile"

"Medical treatment should be tried before stones and/or irreparable inflammation have occurred."<sup>1</sup>

"Biliary tract disease comprises an important cause of intra-abdominal syndromes. . . . Medical management is the accepted treatment for functional disorders."<sup>2</sup>

## Decholin<sup>®</sup> and Decholin Sodium<sup>®</sup>

(dehydrocholic acid, Ames)

(sodium dehydrocholate, Ames)

"... increase the volume output of a bile of relatively high water content and low viscosity."<sup>3</sup>

*Decholin* Tablets, 3¾ gr. (0.25 Gm.), bottles of 100, 500, 1000 and 5000. *Decholin Sodium*, 20% aqueous solution, ampuls of 3 cc., 5 cc. and 10 cc.; boxes of 3, 20 and 100.

1. Segal, H.: *Postgrad. Med.* 13:81, 1953. 2. O'Brien, G. F., and Schweitzer, I. L.: *M. Clin. North America* 37:155, 1953. 3. Beckman, H.: *Pharmacology in Clinical Practice*, Philadelphia, W. B. Saunders Company, 1952, p. 361.

AMES COMPANY, INC.

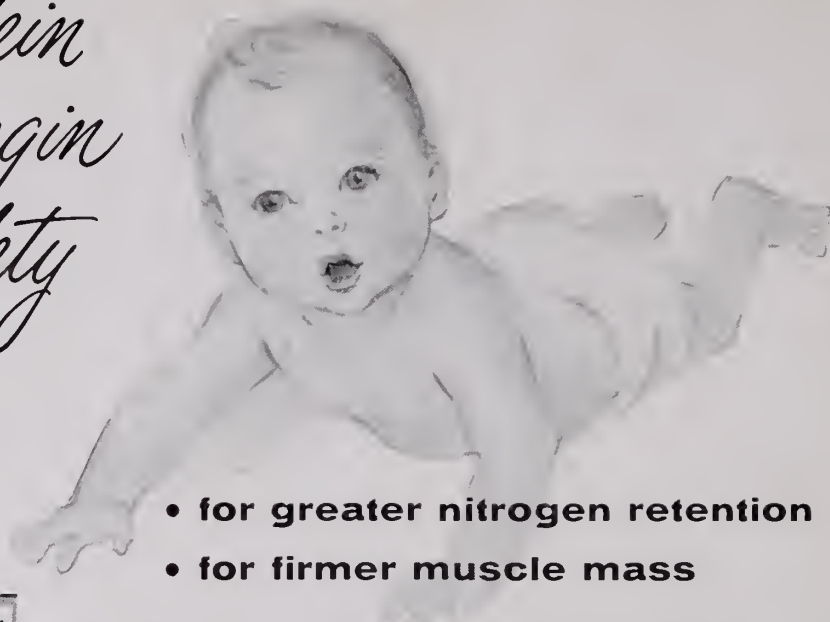
Elkhart, Indiana

Ames Company of Canada, Ltd., Toronto



53754

*A protein  
margin  
of safety*



- for greater nitrogen retention
- for firmer muscle mass

# LACTUM

NUTRITIONALLY SOUND FORMULA FOR INFANTS

LIQUID

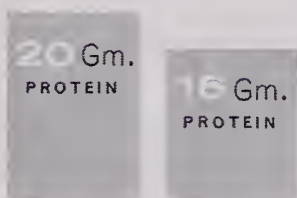


POWDERED



In the bottle-fed infant, a higher protein intake, with greater nitrogen retention, results in firmer muscle mass, better tissue turgor and better motor development.<sup>1</sup> A protein intake that does not maintain positive nitrogen balance "cannot be considered optimal or even safe for any length of time."<sup>2</sup>

During the first year of life, the infant's nourishment is derived primarily from his formula. Hence it is especially important that the formula be generous in protein. The usual Lactum® feedings provide 2 Gm. protein per pound of body weight—25% more than the Recommended Daily Allowance of 1.6 Gm. per pound (3.5 Gm. per kilogram).



Lactum formula  
for a 10 lb. infant

Recommended  
Daily Allowance  
for a 10 lb. infant

1. Jeans, P. C., in A.M.A. Handbook of Nutrition, Philadelphia, Blakiston, 1951, pp. 275-298. 2. Stare, F. J., and Davidson, C. S., in The Proteins, American Medical Association, 1945.

MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A.

**MEAD**









*The New York Academy of Medicine*

**DUE IN TWO WEEKS UNLESS RENEWED.**

**NOT RENEWABLE AFTER 6 WEEKS**

DATE	BORROWED	BORROWER
APR 25 1956		mt <del>Spencer</del>
<del>MAY 18 1956</del>		
OCT 17 1961		Med Rockville Hosp.
SEP 10 1962		Cum. Hosp. Glen Lake
APR 15 1963		Pack, Zyr





